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THE PROPER DIVISION OF RESPONSIBILITY.

## What School Boards and Superintendents Want to Know About Teachers

E. K. Hillbrand, Mitchell, S. D.

The writer has compiled the following questions after several years of practical experience in placing teachers. Several thousand questions and rating sheets sent out by school boards and superintendents were studied in detail.

Taken as a whole, this outline is far too elaborate for use as a regular rating form. However, by use of the information given, a superintendent might construct a rating sheet adapted to his own needs.

### Personal Equipment

1. Character: Christian; positive; upright; doubtful.
2. Reputation: unquestioned; questionable.
3. General Appearance: exceptional; good; ordinary; poor.
4. Health: exceptional; good; ordinary; poor.
5. Initiative: exceptional; good; ordinary; poor.
6. Self-Reliance: exceptional; good; ordinary; poor.
7. Enthusiasm: exceptional; good; ordinary; poor.
8. Self-Control: exceptional; good; ordinary; poor.
9. Tact: exceptional; good; ordinary; poor.
10. Habits: exceptional; good; ordinary; poor.
11. Voice: exceptional; good; ordinary; poor.
12. Business Sense: exceptional; good; ordinary; poor.
13. General Culture: exceptional; good; ordinary; poor.
14. Personality: exceptional; good; ordinary; poor.

### Professional Equipment

1. Understanding of Children: exceptional; good; ordinary; poor.
2. Cooperation: exceptional; good; ordinary; poor.
3. Loyalty: exceptional; good; ordinary; poor.
4. Professional Interest and Growth: exceptional; good; ordinary; poor.
5. Professional Knowledge: exceptional; good; ordinary; poor.
6. Attitude toward Superiors: exceptional; good; ordinary; poor.
7. Scholarship: exceptional; good; ordinary; poor.
8. Use of English: exceptional; good; ordinary; poor.

### Social Equipment

1. Interest in General School Activities: exceptional; good; ordinary; poor.
2. Social Balance: exceptional; good; ordinary; poor.
3. Community Leadership: exceptional; good; ordinary; poor.

### School Management

1. Discipline: exceptional; good; ordinary; poor.
2. Interest in Welfare of Pupils: exceptional; good; ordinary; poor.
3. Care of Rooms, Lights, Heat and so on: exceptional; good; ordinary; poor.
4. Business Routine, Reports, Records and so on: exceptional; good; ordinary; poor.
5. Use of Working Time: exceptional; good; ordinary; poor.
6. Executive Ability: exceptional; good; ordinary; poor.

### Technique of Teaching

1. Daily Preparation: exceptional; good; ordinary; poor.
2. Skill in Motivating Work: exceptional; good; ordinary; poor.
3. Standard of Recitation: exceptional; good; ordinary; poor.
4. Skill in Assignment of Lessons: exceptional; good; ordinary; poor.
5. Attention to Individual Needs of Pupils: exceptional; good; ordinary; poor.

### Results

1. Attention and Response of Class: exceptional; good; ordinary; poor.
2. General Development of Pupils: exceptional; good; ordinary; poor.
3. Constructive Influence: exceptional; good; ordinary; poor.

### General Rating

EXCELLENT; GOOD; ORDINARY; POOR.  
QUESTIONS WHICH CAN BE ANSWERED BY "YES" OR "NO."

- |  | Yes | No |
|--|-----|----|
| 1. Does his influence encourage and refine pupils? ..... |     |    |

2. Is he inclined to be at all negligent or lazy? .....
3. Does he adjust himself to existing conditions? .....
4. Could he remain where he is teaching now? .....
5. Does he find fault with the school or community? .....
6. Does he keep company with his pupils? .....
7. Does he pay his debts? .....
8. Does he use tobacco? .....
9. Does he swear? .....
10. Have you seen him teach? .....
11. Does he give strict attention to school work? .....
12. Is he in a rut and "set" in his ways? .....
13. Is his community influence positively helpful? .....
14. Does he devote too much of his time to social duties? .....
15. If he were applying to you for a similar position would you be willing to accept him? .....
16. Has he ever failed of reappointment because of incompetency or other causes to his discredit?

17. Does he secure the good will and respect of pupils? .....
18. Does he sing well? .....
19. Has he ever resigned in the middle of a school term? .....
20. Has he ever broken a contract to teach? .....
21. Has he had any teaching experience? .....
22. Has he had any practice teaching experience? .....

### GENERAL QUESTIONS

1. Does he have any physical, mental or moral defects that endanger success? If so, what? .....
2. Has he any peculiarities in manner, voice, appearance or person? If so, what? .....
3. Does he have any special interest in music, drawing, boys' work, girls' clubs, or other extra-classroom activities? If so, what? .....
4. Underline the special subjects he can teach successfully: drawing, music, penmanship, physical education and so on.
5. Can he play musical instruments? If so, what? .....
6. For what kind of teaching position or subjects best prepared? .....
7. How long and under what circumstances have you known him? .....
8. Number of semester hours, term hours, points or major credits in professional education? .....
9. What is his nationality? .....
10. Does he meet all the State requirements?

## Planning the Summer's Repairs

E. V. Laughlin, Superintendent of Schools, Hopkinton, Iowa

The writer once taught in a school system directed by an exceedingly pleasant and affable school board. It was indeed a real pleasure to sit in council with this board—the members were always so happy and jovial and good-natured and always acquiesced heartily in every request that seemed half-way reasonable. One might surmise from this description that this particular board was indifferent and happy-go-lucky in the administration of the schools. However, this is in reality far from the truth for the board I am referring to was keenly conscious of its duty to the community and sought in every way to keep the schools up to standard. The moral of this introductory paragraph is that a school board may be affable and courteous and at the same time fully attentive to its public duty.

The reason why I am introducing this discussion by reference to this particularly affable school board is because of the systematic way in which it planned the summer repairs on the school buildings. Too often, unfortunately, repairs upon school buildings are neglected during the season of the year when they can best be attended to with the result that there is later much inconvenience to the school. For instance, there are frequent cases in which needed repairs to the heating system, oftentimes known many weeks in advance, are allowed to go until cold weather reminds the board of their negligence. Every fall brings numerous reports of schools that have been compelled to dismiss while repairs of this kind are being made. Good business judgment ought to make school boards aware that the proper time to undertake repairs is during the vacation season when there need be no interference with the assembling of the schools. Every school board should canvass the matter of coming repairs well prior to the close of school and take definite steps toward having what is necessary accomplished during the vacation period.

There are distinct advantages in having the matter of repairs taken up prior to the close of the school year. For one thing the superintendent and teachers are present to counsel and advise. For another thing the nature and urgency of repairs are generally fresher in mind at this time than later. The general slowing

down that comes with the dismissal of the schools makes it increasingly harder to bring school boards together; too often there will be postponements and delays with the result that the weeks will slip by and the opening of school in September will find the repairs untouched. Further than this it is generally easier to bargain with laborers and artisans than it would be when the work becomes urgent. Also, contractors and builders will be freer with their bids owing to the longer time available in which to order and secure material. Viewed from every angle, it is the part of wisdom to make due preparation for school repairs before the beginning of the summer vacation.

The determining of repairs to be made upon school buildings is not a matter to be passed over lightly or to be wholly delegated to others. Passing judgment as to the nature and extent of repairs is one of the most important duties falling to school boards. An examination of the following fields will give some notion of the extent of the things to be done:

1. The heating plant—its adequacy, safety, durability.
2. Exterior and interior painting.
3. Wall and ceiling decorations.
4. Flues and chimneys—durability and safety.
5. Alterations in rooms, halls, and closets.
6. Renewing of floors.
7. Drains to sewers, septic tanks, and cesspools.
8. Plumbing in all its various forms—to drinking fountains, heating plant, water closets, shower baths, etc.
9. Fire escapes and fire precautions.
10. Establishing new walks and renewing old cement and brick walks.
11. Reseating classrooms and reestablishing blackboards.
12. Renewing broken or damaged plastering.
13. Establishing or repairing outdoor water closets with due regard to sanitary conditions.
14. Determining the location of wells with special attention as to their nearness to closets, cesspools or dangerous drains.
15. "Slow Down" signals.
16. Roof and exterior sheet metal repairs.

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# Individualized Instruction in Small High Schools

A. J. Stoddard, Superintendent of Schools, Bronxville, N. Y.

Ever since our forefathers organized a type of government for these United States that depended for its perpetuity upon an educated citizenship and made it necessary to develop a school system that would make it possible to educate millions of children on a wholesale plan, many attempts have been made to break the inefficient lock-step of teaching boys and girls in grades and classes.

The curriculum of the usual small high school is fixed largely by college entrance requirements. These requirements present quite definite and constant outlines of the facts, knowledge, and skills that are to be attained by high school graduates. The task confronting the faculty is not so much "to reason why," but rather to help the student acquire as much of this set subject-matter, in as efficient manner, as possible.

It is now realized definitely just how widely students of approximately the same chronological age vary in their ability to acquire facts, knowledge, and skills. To complicate the matter further, the same student varies considerably amongst the different subjects. The individual method is based upon the fundamental principle that both time and amount, or quality, of learning cannot be made constant factors. If time is made the constant, then the amount required must vary. The class method, so generally in use, makes time the constant, and necessarily varies amount and quality, thus giving occasion for the charges of inefficiency in school work that are being made so frequently today. The individual method chooses amount or quality as the constant, letting time be the variable.

The individual method preserves the advantages that come from having children do their school work in groups, or in a natural social environment, and, at the same time, lets each child progress as an individual in acquiring those facts, knowledge, and skills that he must acquire according to his own rate and ability. The individual method is not a system of wholesale tutoring because the essential feature of tutoring is that the child be removed from a social environment and segregated while he learns. There can be as much and more of social development for the child under the individual method than is possible under the class method as it is ordinarily found in schools of America. There is no situation quite so non-social as the usual classroom with its rows of seats and children and the question-answer type of teaching. Under the individual method, pupils work often in varying groups and the room situation is quite informal and natural.

The general plan of the individual method, as applied in the Bronxville schools, combines many features of the Dalton plan and the Winnetka plan, together with suggestions received from other experiments that are being carried out in many places. Rather than name it any particular plan, it is called merely "The Individual Method." While the plan is in use in the elementary grades as well as in the high school, only its operation in grades seven to twelve is discussed in this paper. The essential feature of the individual method is that of the individual and personal check-up of the progress of each and every student. Even though he may study with a group, or acquire some of his facts, knowledge, and skills from class conferences or otherwise, the testing of what he has attained is an individual matter.

## Features of the Class Method

The essential feature of the class method so



generally used in our high schools is the class recitation. It is quite generally believed that the following criticisms can be made legitimately of the usual class recitation:

First: As a testing device the recitation is inefficient because of lack of time to test adequately what any individual child has learned. Nothing is gained from testing what a whole class has learned—the only thing that really counts is what each child has learned.

Second: As a teaching device the class recitation is inefficient. It is based upon a child's acquiring knowledge through the ear. We do not learn efficiently through the ear. We usually have no assurance that any particular child is "tuned in" to what is going on in the classroom. Moreover, those that advocate the individual method believe that education is in proportion to the amount of effort expended by the individual, and the best assurance that effort is being expended comes from giving the child something to do, not something to hear. Education is a matter of growth from within and does not come through a "pouring into" process.

Third: The value that is claimed for class discussion is not usually as great as it is thought to be. Very often but a few of the class take part in the discussion and so frequently the discussions are what they were called by a teacher of many years' experience—"Forensic exchanges of ignorant opinion!" Whatever value there is in a discussional way in the class method is more than equalled through the group conferences that are held under the individual method.

Under the individual method every attempt is made to throw more responsibility onto the child and to make him feel that his school work is his and not the teacher's job. A pupil soon finds out that unless he puts forth all the effort of which he is capable he makes very little progress. Unless he does his work day by day he does not succeed. Of course, under the class method he does not succeed unless he works, but he is not brought face to face with the fact in just the same direct way and as constantly as he is under the individual method. If the schools of America can bring boys and girls to a realization that each one of them is responsible for his own progress and success, that unless he does his work day by day he will find his next day's task "staring him in the face," that no one else will do his work for him, and that he must actually complete one task before he goes on to another, perhaps the biggest lessons of all will have been taught.

## Progress the Measure of Efficiency

The individual method makes the progress of each and every child the measure of the efficiency of the work of the classroom. It changes the teaching process from that of pouring education into the child to that of providing a classroom situation that is favorable to the best learning on the part of the child. Thus the

teaching becomes a means to learning by the child, which is the end of all the process. It recognizes the principle that education is dependent not so much on how much the teacher does but how much the teacher can get the child to do that is worth while. The child gets his own education—it is not given to him—which is more nearly in accordance with life as he will meet it.

According to the individual method as it is used in Bronxville, subject-matter is divided into "assignments." For instance, the subject of factoring in algebra might constitute an assignment. Different parts of the assignment are given one or more "unit" values. A "unit" is the value assigned for doing a part of an assignment that requires approximately one hundred minutes of study for completion by the normal pupil. As the student progresses through the assignment he is given "practice tests" which are diagnostic in nature. These tests are corrected by the student according to answer sheets that are so keyed as to indicate what he is to study if he has not fully completed the part of the assignment covered by the test. He may take several different forms of practice tests on a particular part of the assignment before he completes it, although usually he takes a succeeding test over only the part that he missed on the preceding test. If the student would be tempted to cheat in taking one of these practice tests he soon finds that it would make no difference because the practice test is given as a teaching device anyhow.

During the time that the student is progressing through the assignment he may have one or more personal conferences with the teacher. This device of a personal conference has proved one of the most valuable in use with the method. The student seeks the conference and the teacher talks over with him his problems, difficulties, and progress. Also, the personal conference offers excellent opportunity to test the student on what he has accomplished. It affords the teacher an opportunity to give the student an appreciation for the subject that is not possible in the broadcasting class method. Religious leaders testify to the fact that the most effective and efficient work is done through personal conferences with individuals.

After the teacher and student are convinced that the student has qualified himself for the final test over the assignment, it is given to him. Just as with the practice tests, the whole or parts of the final test may have to be taken several times. Whenever the final test is passed completely, the student is given the next assignment in the subject. Under the Dalton plan a new assignment is not given in one subject until he has completed his monthly assignments in all subjects. In Bronxville, one subject is not made to carry any other subject and a student will progress in one subject as rapidly as he can, if he does not slight his other subjects as far as proportion of time is concerned. If he does get behind schedule in a subject, he is required to give it special time at the close of the day.

Class conferences are held several times per week in each subject. These conferences are quite different from the usual class recitation. All testing, other than review, is omitted because it has been done so much more efficiently through the method outlined above. The conferences, offer opportunity for special reports, special discussions, oral English, and group matters that are of especial interest to the whole group and in which the whole group can



participate. Also, it is often economically employed for the purpose of anticipating processes that are to be involved in future assignments. It is during these conferences that purposes are initiated and projects carried on, giving rise to social values that might be lost during the more individual work on assignments.

According to the plan in operation in Bronxville, the students pass from one laboratory (a room where a pupil studies) to another at will, the only exception to this being when a particular room is in use for a conference or is filled to capacity. A general study hall is provided to take care of students who can not be accommodated elsewhere at a particular time. A student may stay as long as he wishes in a particular laboratory, with the exception that he must meet his class conferences as they occur. That is, he may work all day on one subject if so inclined.

Of course, the student is guided in all of these matters. Each morning, he plans his day during the first fifteen minutes while in his home-room with his home-room teacher. He plans his day on his "time card." This time card which is open for inspection by anyone, passes through the hands of the principal and the home-room teacher twice each day, affording plenty of opportunity for guidance when needed. In no case is a student told absolutely what he must do unless he has gone far astray in his planning. Our students have shown surprising progress in their ability to plan efficiently their day's work. Whenever a student enters or leaves a laboratory, the teacher in charge of the laboratory records the time and places her initials on the card.

As a student demonstrates that he can use his time efficiently and not waste it about the halls or elsewhere, he is relieved from showing his time card but uses it in planning his daily program just the same. A large proportion of our students are being granted this privilege and it practically is eliminating disciplinary problems. In fact the individual method has reduced disciplinary problems to a negligible part of what they once were. The pupils are too busy to make trouble. They will tell you they haven't time to waste.

#### Assignments are Completed

It will be noted that a student is required to complete one assignment before he goes on to another—not just "pass." This causes the progress of many of the students to seem to be quite a little bit slower than under the class method. But, really, it is just the opposite. Because all pupils are reciting together in a class does not signify by any means that all of them are up to that point. The fact that it is necessary for a student to really master his subject-matter as he goes along is one of the greatest significance and importance. It is this requirement that meets with most objection on the part of many students and their parents.

Under the requirement of completion of work, a student may not always be ready for regents' or college board examinations when he or his parents think he should be. A student is certified as eligible for regents' or college board examinations in a particular subject when he has completed all of the assignments that make up that subject. While it may take many students a longer time to get ready for their particular examinations the records they make ought, in time, to be much higher, and the mortality rate much lower. They are so accustomed to the evils of the class method that they do not see them as such but rather look upon the attempt to correct these evils as constituting the only evil.

Under the class method, the pupil sits with the same class day by day unless he fails at the

end of the semester or the year. Only a small percentage of the pupils fail and then only when conditions are very serious. It is difficult to get parents and pupils to realize that, even though they all stay together and appear to be together, they are widely apart—far more widely apart than if some of them were to be allowed to "pass" on to the next grade while others were to fail.

Under the individual method a large number of the pupils seem to be "behind" and the parents of these pupils are constantly confronted with that fact. It is a source of discomfort to them and the issue is a daily one instead of once or twice a year. Parents and pupils must be slowly and patiently shown that when a pupil is doing the work of which he is capable at the rate of which he is capable there is no cause for complaint on the part of either parent or pupil and that it is only under such conditions that real progress is being made.

The direct problem that has caused most of our work and study up to date has been that of the assignment. There is still a tendency for the assignments to be too complicated and to require as a minimum for all what should be the maximum for many. In other words, our assignment should require the minimum essentials for all, with enriched and extended requirements for those that are capable of doing more. We are not interested in students completing their high school courses in less than four years, but we are attempting to get each pupil to work more nearly to his capacity.

The biggest and most interesting problem that confronts those using the individual method is the proper correlation between group work and social work, or, more specifically, the relation of drill work to projects in education. Greater progress probably will be made in the solution of this problem in the elementary grades. However, promising strides towards its grades rather than as the high school because of greater freedom with curriculum in their solution are being made in several subjects of the high school. From an ideal standpoint, we all agree with Dr. Kilpatrick that "education is not acquiring specified subject-matter fixed in advance it is the continuous remaking of life by acquiring subject-matter as it is needed for present behavior." The practical application of this ideal in the classroom probably will come slowly with the passing of the years.

#### Discarding an Academic Program

Dr. Courtis of Detroit says: "For one thing, it is apparent that an ideal course of study would consist of two parts: (1) a series of social projects in which there would be need for the use of fundamental skills in meaningful situations, and (2) a series of self-instructive, self-appraising practice exercises, so closely correlated with the project work that children could avail themselves of drill exercises as they became conscious of the need. The danger of the completely organized drill system, however perfectly individualized, is that both teachers and children will come to consider skills as ends in themselves. Under such conditions, the transfer value of the skill developed

is small. While the danger is negligible for competent teachers who neither overemphasize the drill work, nor permit the use of drill exercises by children, except in response to a felt need, it is a very real danger for teachers without vision."

Dr. Bobbitt of the University of Chicago commends the individual method as a long step towards the realization of the ideal when he says: "The individual plan, in which there is a sufficiency of group activities, will permit the functional curriculum, whereas the mechanical lock-step plan is one of the greatest obstacles in the way of developing a functional education."

Now, it is possible for a school in which there is individual instruction to hold to an ancient, reactionary, academic program. It can lay out the content of the older type of curriculum into definite units of work. It can provide teaching and testing materials to cover each of these units. And thus it may have merely another plan for doing the ancient thing. It may merely claim that it can do it better by letting each individual go his own gait. It must be noted, therefore, that the plan of individual training does not necessarily carry with it an improved type of curriculum. We wish here only to point out that it can be so employed when we wish to do so, and that the mechanical class-teaching plan does not lend itself to such improvement."

After fourteen months of use of the individual method in Bronxville, certain results are becoming quite evident, according to the testimony of the teachers, students, and parents. All of our students are studying harder than ever before. It is too early to tell definitely whether or not they are learning more than before, although results so far are encouraging.

There is no question but that our students are growing in their ability to plan their own time efficiently and in their willingness and desire to assume responsibility for their work. Both our students and our teachers, because of the assignments, know more definitely where they are going than they did before. Students work constantly with their subject purposes in mind—in fact, they cannot do their work unless they keep their purposes in mind, constantly.

Teachers plan their work more carefully than ever before and know more about what each student is accomplishing. The teachers are beginning to assume, as the measure of the effectiveness of the work, the progress that each child makes—that is, how far he goes from where he is. The question is not so much as to where he is but as to how far he gets from there.

It is surprising to learn that there is an immense untapped source of motivation in the acquiring of facts, knowledge, and skills if the task is clearly, definitely, and concisely set before the child in terms that he is able to understand and within the reaches of his ability to master. A great deal of our necessity for motivation of our school work has come about from the procedure by which we expected the child to learn. We have been doing too much for the child and not expecting enough of him. It is surprising how quickly he demonstrates that he is eager and willing to accept responsibility if he is asked to assume it. From the kindergarten through college, boys and girls have been told instead of being allowed to do for themselves. If the individual method contributes to the development of men and women that are able to "stand on their own feet," it will have done much in a democracy where every individual must think for himself.

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—The United States bureau of education has just issued a statistical report ending with 1922 which fixes the attendance in the public schools of the country at 20,366,218, private schools 1,355,000; total 21,721,218. The total school and college attendance is 25,850,961. The estimated cost is placed at \$2,053,250,492. The total number of teachers is noted at 871,131. Of this number there are 180,362 men and 690,769 women. The total value of all types of schools is \$4,369,163,043.

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# School Budgets and Budget Procedure

Wallace Emerson, Paso Robles, Calif.

In attempting to discover certain fundamental principles of budgeting, both from a consultation of authorities in the matter and from an attempt to discover current procedure, one fact forces itself upon the attention; namely, that there is as yet a large amount of diversity in the conception of what the budget is and what it is to accomplish, and that there is an unnecessarily large amount of dissimilarity throughout the country with regard to budget form and budget procedure.

It will be said that no two cities and no two states have similar local conditions and, consequently, could not have similar budget procedure. However, upon reflection, it will be seen that this diversity is more apparent than real, in as much as educational aims are becoming more and more identical throughout the United States. The raw material is the same; the processes of instruction and general method of procedure are becoming standardized; cost accounting of systems are becoming more uniform; consequently, it seems pertinent to ask why there should not be a standardization of budget form and budget procedure.

This article is written in an attempt to collect certain well known facts of budget procedure. A subsequent article will attempt to discover actual budget procedure in the cities of the United States as discovered by answers of over 400 questionnaires. A final discussion of the various state laws governing budgeting and a summary of the budget situation will complete the study.

## I—Principles of School Budget Making

Public school administration as a separate branch of educational endeavor has grown up in the last fifty years, and has evolved certain principles that seem to be well defined and fundamental. In the field of supervision, possibly, there is not much clearness, nor are fundamental principles so well worked out. But in matters of organization, involving relationships of the board of education to the school, of the board to the superintendent, of the superintendent to his subordinates, and in general the duties devolving on each, have been placed upon sound basis.

Until recently, however, very little attention was given to the matter of school budgets. Prof. Geo. M. Baker, of the University of Kentucky, says: "So far as we have been able to learn, Oregon is the only state having a law making obligatory the annual preparation and publication of a budget by every school board in the state."<sup>1</sup> Even now, the literature on the subject is scanty, and covers but a few phases of this important branch of school administration. In fact, in the average small town in many states, the city administrator of the schools in that city might even have difficulty in determining what we mean by a budget. Certainly he would not have received any clear or definite information from his state school laws. This is not strange when we remember that it is only recently that our own United States Government has adopted the budget system—though previous to this, 46 states had already provided for the handling of state funds by a well defined budget system. The growing cost of government, however, has made the question of budgeting an extremely important one, and the people are demanding that there be a pre-audit of expenditures in order to guarantee that the public funds shall not be spent wastefully or uselessly. If the cost of general government has mounted so that the budget is necessary,

how much more so is the case of the public schools. Public school expenditures are fast approaching the billion dollar mark,<sup>2</sup> and it may rightly be classed with other big business in the United States.

## Some Fundamental Principles

It is by no means easy to discover the fundamental principles applicable to budget making, although we realize that there are such principles and that they must be discovered in order to discuss the matter intelligently.

In the first place, why make a budget? The reply to this question is expressed by Frank E. Spaulding as follows: "The school budget is the most influential factor in educational procedure. It determines organization, methods, and results; the size of classes; means and materials of education; educational values; in fact, no phase of education escapes the influence of the budget—whether a budget is made or not."<sup>3</sup>

In defining what we mean by budget, we may take our choice of any or all of several points of view. For instance, Sat defines a budget as "a balance between the needs and the resources of the state."<sup>4</sup> Paul LeRoy-Beaulieu says, "the budget is in the first place a statement forecasting the revenues and expenditures during a certain determined period of time—and is also an authorization or order by competent authorities to make the expenditures and collect the revenues designated."<sup>5</sup> Dr. Sears characterizes the budget as "a financial and a quantitative expression or interpretation of the school policy."

## The Budget Cycle

Budgeting involves a cycle of operations, past, present, and future. We may begin anywhere in this cycle. We may have, first, the collection of past data of income and expenditure; second, the evaluation of both in the light of present conditions, such as sources of income and trends of cost; third, the preparation of an estimate for the next year, based on these findings; fourth, the enactment of the budget; and fifth, the execution of this budget, which it may be said is a test of the soundness of the prognosis, and furnishes a basis for evaluating the correctness of the prognosis.

This brings us to the beginning of the cycle once more. This budget cycle is continuous, the process consisting of four mutually interdependent steps.

Stourm<sup>6</sup> says that there are four major operations in budget procedure: First, the preparing of the budget, which is an executive responsibility; second, voting the budget, which is a legislative responsibility; third, executing the budget, which is again an executive responsibility.

<sup>1</sup>Trends of School Costs, Burgess, Page 17.  
<sup>2</sup>The Making of a School Budget, Spaulding, F. E., Sch. Review, 26:684, Nov., 1918.  
<sup>3</sup>The Budget, Stourm, Page 3.  
<sup>4</sup>Ibid.  
<sup>5</sup>The Budget, Stourm, Page 52.



bility; and fourth, enforcing accountability for such expenditure, which is a legislative function. It will be seen, then, that these four steps are alternately executive and legislative functions.

## First Major Operation

In discussing the first head, the question naturally arises as to who shall prepare the budget. Stourm says: "Necessarily the executive prepares the budget. The executive alone can and should do this work. Others may know certain details as well, possibly better than the executive; but nobody can have so extensive and impartial a view of the mass of these details. And no one can compromise the conflicting interests with so much competence and precision. \* \* \* The man who wants to build a house begins by getting plans from the architect who is to have charge of the constructive work, the owner reserving for himself, however, the right to examine, to improve, and to reject these plans and estimates should such action be necessary. In the same way the legislative body commissions the executive to draw up and submit to it a program of the revenues and expenditures for the coming year."<sup>7</sup>

If this be the proper viewpoint, and the superintendent of schools be the executive, what shall be our attitude toward the making of the budget by the financial authority or business manager? Frank W. Ballou answers this by saying: "There must be a general recognition that making a school budget is primarily an educational function, which should be supervised and directed by educators."<sup>8</sup> This seems to be a perfectly sound view, as we are willing to admit that a business manager exists merely to carry on the educational process. To what extent a superintendent should depend upon subordinates, that is, principals, department heads, teachers, janitors, etc., will be discussed later.

## The Principles of Procedure

Having considered the question of who shall make the budget, we must decide upon what basis budget making should proceed. We may say that there are four basic ideas that must be taken into account: First, the budget must be built upon an accurate accounting system running over a series of years. This accounting system should be based on a functional or service analysis, inasmuch as functions in a school system may expand, but are not likely to disappear or change materially. Second, there should be a knowledge of proper educational objectives. That is, we must have clearly in mind the thing that we want to buy educationally. If we do not know what we want to buy, we are extremely likely to buy things we do not want. Third, there must be a careful consideration of relative values. In other words, knowing that there are certain items which we must buy, we must know which of these are the more important, which are luxuries and which are necessities, and in general, how much of each is necessary to a well-balanced educational program. Fourth, we must estimate the probable revenues for the period of time to be covered. There is, of course, no use in voting to buy certain items of educational service if we cannot pay for it.

<sup>7</sup>Ibid, Page 53.

<sup>8</sup>"In practice 252 of 505 superintendents reporting prepare the annual budget for the board's consideration. In 95 cities the budget is made up by the board itself, in 95 by a committee of the board, and in 66 by the secretary of the board." Administration of Schools in the Smaller Cities, Deffenbaugh, Bull., 1922, No. 2.

<sup>9</sup>Efficient Finance for the City School System, Ballou, F. W., in Proceedings of N. E. A., 1918, Vol. LVI, Page 614.

<sup>1</sup>American School Board Journal, Nov., 1916.



### Form of the Budget

The next problem to be considered in the preparation of the budget is its form. This may be considered under four general headings:

First, as has already been mentioned, it must be organized on a functional basis, for it is only in this way that we can get clearness and definiteness, unless, indeed, we take some artificial form which is likely to change from decade to decade. Second, closely related to this is the question of itemization. This includes the question of how much or how little itemization is necessary, and for whom should we itemize?

This brings in the larger question, for whom are we making the budget? We cannot enter into an extended discussion of this phase but, in general, it seems that the budget is made for the use of the authorizing body, the general public, and the school executive himself. It seems, therefore, that it should be itemized sufficiently that all interested parties shall have a clear and common idea as to the purpose to which various funds are devoted. Furthermore, a sufficient itemization should be made to insure the use of these funds for purposes stated and for no other. We might say that a minimum itemization would show at least three items of expenditure: First, current expenditures; second, debt service; and third, capital outlay. And on the revenue side, two items: First, estimate of amounts likely to be derived from state, federal, and non-local sources; second, amounts necessary to be raised by local taxation.

Third, there should be a standardized form—one which is based on a functional analysis and which may be expanded as need requires. Unless a form is standardized, it is impossible to compare a budget of one year with one of years previous, and there will creep in confusion, fatal to clearness. Fourth, the budget form must be closely related to the accounting system. This is so obvious that no discussion is necessary.

### The Time of Preparation

The time of preparing the budget is a question which seems to have received little attention from the writers on the subject. The principles involved may be stated briefly. First, the budget should be prepared as close to the beginning of the fiscal year which it covers, as possible, in order that unforeseen contingencies may not arise making a general redistribution or even a material increase necessary. Second, it should be prepared and authorized before the beginning of the fiscal year in order that there be no unauthorized expenditures, and a consequent confusion.

In summing up the qualities which a budget should possess, Stourm says that the main qualities are frankness, clearness, unity, economy, equilibrium, etc.<sup>10</sup> In fact, he says, the qualities which a budget should possess are too numerous to mention; but he finally boils it down to the following: "First, the budgets must describe 'in extenso' all the operations relating to revenues and expenditures, clearly and frankly. Second, the budget must estimate revenues and expenditures as exactly (and reliably) as possible." He lays it down as one fundamental law of budget making that all expenditures should be listed on one hand, all revenues on the other; and the most grievous sin that can be committed is a mixture of these two main functions.

### The Second Major Operation

The second major operation is the authorization of the budget. It seems to me that there are two real authorizations—first, the yearly or immediate authorization by the legal authority, that is, the city council, board of education, etc.; second, a general or long-term authoriza-

tion by the community. This latter type of authorization is frequently disregarded by school executives and boards of education; but of late years we are beginning to understand that a continuous financial policy can never be carried out unless it is sold to the community and is authorized by community sentiment. We shall not attempt to give a discussion of this phase, however, but will discuss the question of legal authorization.

In the first place, who shall authorize the budget? Shall it be a political or non-political body; a legislative body, or a city electorate? Inasmuch as the authorizing body controls the entire school policy, it seems only fair and just that that group which is held responsible for results obtained educationally, should also be given the control necessary to secure those results. This would mean that the board of education would be the proper authorizing body; and Frazier, in his excellent study of "City School Finance," shows that schools under the financial control of the board of education have a distinctly higher index of excellence than do schools controlled by political bodies, such as city councils, commissions, etc.

The question as to when the budget shall be authorized can in general be answered by the rules laid down for the time of the making of the budget.

### Budget Expenditure

The next general consideration of the budget is expenditure. By whom shall the budget be expended? It seems reasonable that the authority who prepared the budget should also execute the same; inasmuch as the same qualities of judgment Stourm mentions—that is, "an extensive and impartial view"—are as necessary in administering as in preparing, and the superintendent is the only one "who can compromise the conflicting interests with \* \* \* competence and precision." Of course, in case there is to be no latitude for judgment in the expenditure of the budget, these qualities may not be needed.

If the executive is to administer the budget, under what restrictions shall he do so? Three possible ways of handling it are obvious: First, he may be given a free hand within the itemization provided by the budget. Second, he may be given a free hand within certain amounts, but must obtain board authorization of all large amounts. Third, he may have complete control of the budget, with power to make whatever readjustments seem necessary, but with

certain checks upon him of an accounting and business nature, which shall insure honesty and efficiency. It seems almost impossible to lay down any fundamental theories in this matter, as the question involves the training and competency of the superintendent, local conditions such as size of school system, etc., and probably legal considerations. We shall satisfy ourselves with stating the problem, and in a later article we shall evaluate the practice in different parts of the country.

### The Final Operation

The final operation in budget procedure is that of enforcing accountability, and we ask ourselves these two questions: (1) Who shall enforce accountability? (2) How shall it be done? It seems logical that the body which authorized the expenditure of the budget should also be the body approving or condemning the execution of that expenditure. It does not seem reasonable that a community should make a board of education responsible for the execution of a budget which it did not authorize. On the other hand, if a political body such as a city council authorizes the expenditure, it should also enforce accountability. If the city council performs these two functions the question naturally arises: Why should we have a board of education at all?

From another standpoint it is impossible for a board of education to hold to accountability for the expenditure of a budget, an executive who has not had a free hand in administering the budget. And it seems to me that responsibility will be commensurate with the authority given. If a board of education passes on each item of the budget, they have nothing for which to enforce accountability.

To summarize, we may again quote Stourm, who says: "There are four major operations in budget procedure: First, preparing the budget, an executive responsibility; second, voting the budget, a legislative responsibility; third, executing the budget, an executive responsibility again; fourth, enforcing accountability, which is again a legislative function."

To summarize: The budget depends, first, upon a system of accurate accounting. Otherwise it would be impossible to determine the "balance between the needs and the resources of the state." Second, it is an estimate of the probable incoming revenues, and since these revenues are not definitely determined, this involves a determination of what these revenues will be within the limits of certain minima and maxima. Third, there must be a clear analysis of the work to be financed, a functional analysis if possible. Fourth, an estimate of the expenditure necessary to perform this work. Fifth, the authorization of this expenditure by legislative authority, which authority includes the power to collect the revenues designated. Sixth, the actual expenditure of these revenues by the executive authority. And seventh, the enforcing of accountability for the expenditure of the same by same legislative authority that authorized the expenditures. (To Be Continued)

### CHATS DURING RECESS

—Two boy pupils who had "played hookey" found their way into the juvenile court. The judge proceeded to give the boys a sound thrashing. For the want of a birch rod he used a copy of the Congressional Record wrapped tightly in a paper covering. In commenting on the instrument of discipline he said: "That's the first real use I ever found for a Congressional Record!"

—When a crowd of striking high school pupils at Lafayette, Ind., found themselves defeated, they "rotten egged" the home of the superintendent. To go on a strike may have been a form of cheap bravado, but to resort to malicious mischief is worse.



President Geo. J. Ryan of the New York city board of education turning the first shovel of earth for the new junior high school at Jamaica. State Regent Robert W. Higbie at Mr. Ryan's left.

<sup>10</sup>The Budget, Stourm, Page 145.



# School Janitorial-Engineering Service

George F. Womrath, Assistant Superintendent in Charge of Business Affairs, Board of Education, Minneapolis, Minn.

(Continued from April)

## 3. What Wages Should Be Paid?

The minimum wages which should be paid to any employee should be a good living wage, sufficient to provide suitable food, shelter and clothing for himself and family,—husband, wife and one child; and to allow for a reasonable amount of recreation and amusement to brighten life's pathway, and with a little cash left over to prepare for the proverbial "rainy day." It is a social crime to establish a minimum salary schedule on any other basis simply because hungry, mortal, human beings, overwhelmed by the pitiful needs of those dependent upon them, can be forced to work for less pay.

A careful study of the living wage problem resulted in establishing the following wage schedule for janitor-engineers in the Minneapolis public schools. This schedule may vary in other parts of the United States depending upon differences in such items as rent, price of food, price of clothing, etc., but in the main the schedule will be found to be a fair one.

### BOARD OF EDUCATION Minneapolis, Minnesota

April 13, 1921.

#### JANITOR'S BASIC SALARY SCHEDULE

|   | First<br>Year | Second<br>Year | 3rd and<br>subsequent<br>yrs. |
|---|---------------|----------------|-------------------------------|
| Special Janitors.....                               | \$100.00      | \$100.00       | \$100.00                      |
| Charwoman .....                                     | \$ 80.00      | \$ 85.00       | \$ 90.00                      |
| Cleaner, or Janitor ...                             | 100.00        | 105.00         | 110.00                        |
| Assist. Janitor-Engr.-in-Charge (Grade<br>Schools): |               |                |                               |
| 2nd class license...                                | 110.00        | 115.00         | 120.00                        |
| 1st class license....                               | 115.00        | 120.00         | 125.00                        |
| Chief license .....                                 | 120.00        | 125.00         | 130.00                        |
| Fireman—six non-firing months.....                  |               |                | 110.00                        |
| six firing months.....                              |               |                | 125.00                        |
| Janitor-Engr.-in-Charge (High & Grade<br>Schools):  |               |                |                               |
| Assist. Janitor-Engr.-in-Charge (High<br>Schools):  |               |                |                               |
| 2nd class license...                                | 125.00        | 132.50         | 140.00                        |
| 1st class license....                               | 130.00        | 137.50         | 145.00                        |
| Chief license .....                                 | 135.00        | 142.50         | 150.00                        |

#### Extras:

1. Every man who is required to return to his building for night social center work will receive \$2.50 per night.
2. Janitor-Engineers-in-Charge and Assistant Janitor-Engineers will receive \$7.50 extra per month after serving the Board one year.
3. Janitor-Engineers-in-Charge will receive an additional \$7.50 extra per month after serving the Board for two years.
4. All others (men and women) will receive \$5.00 extra per month after serving the Board one year; and an additional \$5.00 extra per month after serving the Board two years.
5. No extra salary will be paid for licenses held until the holder is promoted to either Janitor-Engineer-in-Charge or Assistant Janitor-Engineer-in-Charge.
6. Janitor-Engineers-in-Charge will be paid extra compensation at the rate of \$4.00 per month for each employee in their buildings under their charge. The total per month to be based upon the total annual man-power divided by 12. (Janitor-Engineer-in-Charge not to be counted).

#### Notes:

1. Men holding higher grade license than is required by the buildings in which they work will be paid on the basis of the required license only.
2. Men holding a lower grade license than is required by a building may be put in charge pending their examination for the grade of license required. These men will be paid on the basis of license they hold until they get the required grade of license. If they cannot secure the higher grade license within six months, they will be transferred and the positions offered to those who qualify.
3. Firemen do not receive any extra pay for length of service, for the reason that their positions are generally six-month jobs, but the board tries to find cleaning work for the best men to do during the other six months so as to give them steady employment.

Any system for paying janitors is purely conjectural and often extremely prejudicial which is not based upon a specific minimum rate, with automatic increases based upon (a) length of service, (b) responsibility assumed, (c) demonstrated ability as indicated by class of engineer's license held, and (d) other factors of merit. The three most pernicious of the many systems in vogue for paying janitor-engineers are the so-called "rooms system," the "custodian system," and the "contract system."

Commenting upon the system of paying according to the number of rooms, Mr. John Absalom Garber writes, in Bulletin No. 24 of the Bureau of Education, Washington, D. C.: "The common plan of fixing janitors' pay upon the basis of the 'number of rooms,' or size of building alone, does not equitably distribute the salary in accordance with the service rendered. Such a scheme takes no account of the actual floor space in the rooms and corridors to be cleaned; of window area to be washed; of lawns to be cut, which differ in size in most cities and very widely in difficulty of cutting; of sidewalks to be cleaned, which vary in area; of the age and condition of the building; or of floors and heating plan in the building, all of which vary widely and always react to the disadvantage of janitors in older buildings."

The "custodian system" is that under which the janitorial-engineering work of an entire building is contracted to one man. This custodian, in turn, hires as many other helpers as he considers necessary to do the work in the building, paying them out of the money which he receives. Under this system the help is constantly changing; the crew is always kept at the absolute minimum number required to do the work; the wages paid are the least which it is possible to get men to work for; no well trained organization can possibly ever be built up; the buildings are seasonally clean or dirty, as in order to save as much for himself as possible out of the amount allotted to his building the custodian lays off his helpers whenever school is not in session, hiring them again and working under pressure for short periods before school opens, in order to get his building ready for occupancy instead of keeping his building in first class condition at all times.

The "contract system," whereby the school janitorial-engineering work of the entire city is contracted to one man, who in turn lets out each school building to a separate sub-contractor, who in turn handles his building just as is done under the custodian system, is the most pernicious of all systems, as it not only has all the objectionable features of the custodian system, but many more, and separates the actual control and supervision of the janitorial-engineering service still more widely from the business superintendent.

Mr. C. W. Handman, business manager of the Board of Education of Cincinnati, Ohio, who has perhaps had as wide an experience with both the custodian and contract systems as any man in the United States, has the following to say about the contract system:

"Under the one-man plan, the men have no particular pride in the building in which they happen to be working and are shifted so rapidly from school to school, as the emergency arises or the cleaning contractor deems advisable, that few have an opportunity to become thoroughly acquainted with their building. The labor turn-over under this plan is tremendous. The Engineer, in particular, should learn to

understand his equipment which under our present plan (the one man plan) he seems to have little opportunity to do.

"Another serious defect is the lack of immediate control over engineers and janitors. When the chief engineer or cleaning inspector finds that direct instructions to the men fail to bring results, he is unable to exert his authority upon the men in question but must first report this fact to the cleaning contractor, which may result in the man's dismissal or shift to another school where the whole process is again repeated. This heavy turn-over is bound to lower the operating efficiency and consequently takes up most of our time in instructing new men.

"Again, there is a natural tendency for the cleaning contractor to hire the cheapest class of labor possible. Aside from the inevitable reduction in the morale of the force, the quality of service is bound to suffer thereby. We more often find men on the job with no idea of what constitutes cleanliness and tidiness, who cannot wield a broom or mop effectively, and engineers who know scarcely anything of the intricacies of ventilating and temperature regulation. Just about the time the men begin to learn something of their duties, they quit, are dismissed, or otherwise pass out of the service. You can readily visualize the result of such conditions.

"Whenever the cleaning contractor can get along with one man less on a house without complaint, he increases his income accordingly. Naturally, when there is a man short on a building, he is not so apt to hurry to the rescue until he is prodded. In a large system, it is easy to have a number of men off duty each day and maybe several days. The contractor does not suffer through loss of pay or longer hours of labor, indeed he profits; the building and the men left on the job do the suffering.

"While I absolutely know that a general contractor can make a better rate per day than the aggregate of individual bids, and superficially appears to be saving money for the board, yet over the entire period, the loss of satisfactory service in the school, the increase of minor repairs, which the board is required to make, and the general dissatisfaction, more than offsets this apparent saving."

It is quite apparent that every defect cited by Mr. Handman as inherent in the one-man plan is also inherent in the custodian system but to a lesser degree.

Imagine the conflict which would arise under either the one-man contract system or the custodian system, if the board of education required the contractor or custodian to have the men employed by them do their work in a certain way and at a certain time; to wear a prescribed uniform; to frequently readjust their hours and duties; to pay a stated minimum wage; to work within a maximum number of hours; to attend a janitor-engineer training school; to comply with definite rules and regulations set up by the Board; etc. This procedure simply could not be carried through successfully. The board itself might then just as well take over the whole responsibility.

In the final analysis, the only janitorial system which has given, or ever will consistently give successful, satisfactory results is that which places the entire responsibility upon one officer of the board. After appointments are made, whether through Civil Service or otherwise, promotions, demotions, transfers and discharges can then be made absolutely on the

basis of merit. Rules can be formulated and standards of work established by the superintendent, and such steps taken and time spent in giving instructions as will produce uniform work throughout the system. Proper supervision of services rendered, responsibility for observance of rules and regulations, direct control of every employee, continuity of service, the creating and building up of a good esprit decorps, flexibility in the administration of the service, and the definite placing of responsibility for either good or bad results, can be secured under no other system.

There is this to be said about both the custodian and contract systems,—they enable the school authorities to have the work done at the minimum cost regardless of condition in which the school property is maintained, and the board official in charge gets rid—for a while—of many of the annoyances and responsibilities which otherwise would rest upon his shoulders.

There is also the system of paying janitors on the basis of a standard rate for each item or kind of work performed. Under this system a fixed rate is paid for heating (per cubic foot), for cleaning (per square foot), for washing windows (per square foot), for care of mechanical equipment (so much per boiler, per pump, etc.), and so on down through the whole list of duties and operations. This system is not only attended with innumerable difficulties even in the cities where it is in use, but it is absolutely impossible to use the same system in any two cities. The first difficulty encountered is that in no two school buildings are the conditions the same, i. e.; the rooms are put to different uses, the mechanical equipment differs in type and age, the classroom equipment varies in almost every room, the yards surrounding each building are different in layout, surfacing, etc. This system also tends toward prejudices in favor of the employer. The compensation paid for each class of work is arrived at by working backward from an assumed wage scale. That is, the wage scale itself is first set up—although it is not supposed to be—and then starting with this assumed wage scale all the factors are listed, and then by a system of evaluation, a price for each factor is arrived at which, when paid for services rendered, will about equal the wage scale which has previously been set up and which is really no more and no less than the authorities desire to pay. The trouble with this system is that every city adopting it must go through its own process of evaluation. And every city using this system must, from time to time, change its rate for each class of work performed, whenever the number of factors entering into the computation grow so large that to pay on the basis of the established rates would bring the salaries far above what would be either a fair or a reasonable wage. Mr. John A. Garber, commenting on this system, says: "The rate must necessarily be somewhat arbitrary and in accordance with the compensation deemed adequate to the service rendered."

Now do not get the man-power schedule and the wage schedule confused. They are absolutely independent of each other. "Man-power" is a constant; "wages" (the "wage scale") is a variable. The man-power, or number of men employed in the janitorial-engineering service of a public school system, depends absolutely upon the amount of work to be performed according to an established degree of precision. A floor may be slopped-over in a minute and left dirty and unsatisfactory. It may take five minutes, or five times the amount of man-power to properly mop the same floor in accordance with the degree of cleanliness which has been set up as a standard. The man-power, or number of men employed, has, therefore, no connection

with the wage scale, which is the basic salary scheduled under which the men are paid. The annual budget or total amount of money to be provided for all the janitors and engineers in a school system, is however, directly determined by the man-power or number of men employed, as this budget equals the number of men multiplied by the wage scale. The most unfair and unjust system of paying janitors and engineers is that which first arbitrarily sets aside a "guess" budget and then makes the number of men employed depend upon the amount of money thus set aside for janitor-engineer wages. Under such a system two things can happen, both of which are highly objectionable

in principle and absolutely unjust to the employees. If this "guess" budget is under-guessed, either (1) a starvation wage must be paid in order to employ the requisite number of men to do the work properly, or (2) by paying a fair living wage not enough men can be employed to do the work properly and the schools must be allowed to go dirty and fall below standard. On the other hand, if the "guess" budget is over-guessed, then the tendency is to spend the budget by employing more men than are needed and thus wasting taxes. The right way to proceed is to, first, determine the number of men needed to do the work properly and then multiply this number by a fair living wage.

(Continued on Page 135)

## A Retiring Superintendent's Obligation to the Community

Joseph Sheffield, Cherryvale, Kans.

It is the duty of every person who is privileged to hold the position of superintendent of schools in a community to serve that community to the best of his ability irrespective of his own treatment by the community. If he is the man he should be and "large enough" for the position, no matter how small the school, he will, without expectation of reward in any form, so work that he may contribute something of lasting worth to the community he serves.

### The Real Test

The real test of the "fiber" will be at hand when the superintendent leaves his present position to accept another or to retire from active work. With this idea in mind the following questions were worked out as a checking list to stimulate thought and not with an idea of covering all points. It is to be noted that no mention is made that lack of knowledge might be a reason for not making the situation for the incoming administration as free and easy as possible. It is predisposed that the superintendent is trained for his job, otherwise he is not to be so classified. Experience is rapidly becoming inferior to training as the most desirable of the qualifications of a superintendent of schools.

### Questions for Report to Your Successor in Order of Their Importance

1. Has proper and favorable publicity been given your successor's election, not for his sake but for the schools?
2. Are there copies on file of all reports made to the board, requests to principals and teachers?
3. Are there daily recitation programs for both of the previous semesters?
4. Are the permanent records completely written up with all essential questions on the blanks completely filled?
5. Have all clerks, secretaries, principals and teachers been instructed to date all material so that it will mean something to those following them?
6. Are there records showing the valuation of the district, past and present levies, bonded indebtedness and other similar matters of finance?
7. Is there a map showing boundary lines of the different schools?
8. Are there copies of the course of study for office files?
9. Is there a complete record of all promotions with an adequate explanation of special cases of failures in grades and high school?
10. Is there a semester report from each teacher stating the work covered in each subject in each class or in each section?

11. Is there a record of the teachers of the previous years with subjects taught, salaries paid, and a statement as to their success or failure? Is the coming year's outlay outlined?

12. Is there a scrap book of printed forms used in the system with suitable explanation if forms are not standard?

13. Is there an invoice of all instructional supplies, janitor supplies, and laboratory equipment?

14. Is there a statement of the policies of the school relative to student activities?

15. Are there on file, copies of programs of all entertainments and social events, schedules of fall, winter and spring athletic events during the previous year, showing moneys received and disposition of same?

16. What changes have been made in the buildings and contents during the past year?

17. Is there a proposed building program? Are there copies of all comparative studies made relative to this program?

18. Is there a concise statement of the order of fire drills for each school?

19. Are the letter files left intact for the year or two previous, so your successor may study them and learn many problems relative to the school?

20. Is there a record of library books with additions and prices, for the year, for each school?

21. How much money was spent for library purposes last year? How allotted?

22. Are the letters on file from the university, state department, North Central Association concerning the standing of the school?

23. Is there a record of periodicals taken with dates of expiration of subscription for each building?

24. Are there records of all classroom visits with recommendation and suggestions made to the teacher?

25. Is there a copy of all programs for teachers' meetings, showing number, nature, time spent, etc.?

In case your successor is unable to come and go over everything in person; have you let him feel your desire to help, have you grouped most of the essential information and had it sent to him so he might become familiar with his job before his arrival? If you have not made at least an honest attempt to do some of these things, put your hand behind you and turn your face away when you accept your last pay check. As superintendent of schools you are the one man in the community who can see that these things are done and in whom people have placed their trust at some time that they would be done.



# Which Would You Have Chosen?

Mary C. Robinson

"What can Lucy Ann Smith do with two hundred and fifty thousand dollars?"

Not that Mrs. Skidmore was voicing a low opinion of Lucy Ann Smith's intelligence quotient, still less that she doubted the importance of money; but she felt there was a definite inappropriateness in the possession of so considerable a portion of this world's goods by one whose little empire had always been the schoolroom.

"Probably she will get some new clothes and then travel; come back home and serve on the school board," said her partner at cards.

And that proved to be exactly what Lucy Ann Smith did. In two years she had viewed the Grand Canyon and the Grand Canal, the Columbia and the Yangtze, Vesuvius and Mauna Loa. The third found her settled comfortably in her old home, serving on twelve different committees, social, civic and religious; but giving the best of herself, during the spring days, to the search for the new teachers which would be needed the following September in the high school of which she had so long been a part.

"I supposed the woods were full of teachers, Lucy," said her brother, who taught mathematics in an ancient seat of learning, "I served on the school board myself once, to finish out Howard's term when he went to University of Wisconsin, and my mail was always full of applications to teach in Grade II or on Brimstone Hill."

"The woods *are* full of them," replied his sister. "But I have seen too many teachers doing five-hundred-dollar work on a fifteen-hundred-dollar job to be willing to pick them off every bush. I want the kind of teacher that I should like for a son or daughter of my own, if I had any."

"Why don't you seek them in their native haunts, Aunt Lou?" said a nephew. "I should think you would really like revisiting the glimpses of the moon. Can't you bear to see anyone else explaining the true inwardness of the cleft infinitive?"

"It does make me homesick to visit schools," replied his aunt; "but that feeling does not fully explain my hesitation. For ten years I taught in half an assembly room that had been divided in two; the partition was simply sheathing, and the things I used to hear make me wish I could see our candidate at work, when they didn't know I was there. Some teachers are at their best when visitors come in, and cross and lazy the rest of the time, more, however, are at their worst before visitors, embarrassed and self-conscious. Besides that, really good teachers are snapped up by the places that pay the best salaries, or they stay from choice in surroundings that they find congenial. Poorer ones often show off well to a casual visitor, and I do not want a third-rate teacher for my beloved high school—least of all do I want to pick out such a one myself by mistake."

"Come down into the laboratory, Aunt Lou," said her nephew Lawrence, who was assistant professor of chemistry. His brother Lewis, a graduate student in the same subject, followed, and they took a short cut across a vacant lot into one of the basement rooms of the University Chemical Laboratory which was a part of the elder brother's private domain.

Turning on the electric light, Lawrence opened a box and made a gesture as though he were taking something out of it. Presently he apparently left the room by a concealed door; at all events he disappeared from view. Lucy Ann Smith was rather dazed at the suddenness of his departure and said to Lewis, "Where did Lawrence go?"

"Come around here, Aunt Lou," said Lawrence's voice, close at hand.

"Look out for his feet, auntie," called Lewis; but he had to catch her or she would have fallen over them, for though invisible they were extremely palpable. Lewis led her safely behind the chair in which his brother was sitting and went on to say, "What do you see now, Aunt Lucy?"

"Why I see Lawrence sitting in a chair, of course. How did you hide yourself, Lawrie?"

"Look closely, Aunt Lou. Lewis and I have been working on something a long time. We aren't quite ready to make it public yet, but we would like to show it to you right now."

Upon careful examination Miss Smith saw that her elder nephew's substantial form was completely covered by a veil, so nearly invisible that it seemed to consist merely of points of light reflected from a black surface.

"Feel of it, Aunt Lou."

"She took the substance delicately between her fingers, and could indeed feel that it existed, hardly more than that."

"Is it woven of moonbeams?" said she.

"Pretty nearly," replied her elder nephew, "but now get around in front of me again and see what you can see."

Lucy Ann Smith obeyed, then stared with all her eyes. "I see nothing at all; absolutely nothing," she said. But when she put out her hand into the blank space it encountered the rough tweed coat sleeve which covered her nephew's arm.

"Now, Aunt Lou, we would like to make some experiments with this thing in the great world, before we say anything about it, and we have been looking for a person of enterprise and discretion, not too big, who would help us out with it. You would be just the one if you care to try it, and you can kill two birds with one stone if you dare to go a-visiting possible candidates, clad in an invisible mantle, and render a valuable service to science at the same time. Do you darst?"

"When I was seven years old and your father eleven," replied his aunt Lucy, "I jumped from the shed roof, side by side with him, much against his will; but I came down safely while he broke his nose."

"I told you Aunt Lou was the girl for us," said Professor Lawrence Smith, "but you didn't believe we could persuade her to take the chance."

"I didn't remember, just then, about the cause of father's broken nose," answered the younger chemist with a grin.

Next morning Miss Lucy boarded an express train, and a few days afterward a slender, elegant, correctly dressed woman might have been seen, in another state, entering a handsome, cream brick building which proclaimed itself a schoolhouse no less clearly than a neighboring edifice by its structure openly avowed to all beholders that it was a post-office. The lady visited several classrooms but took note specially of one, the name of whose instructor had appeared in her mail on many a recommendation.

Mr. Belden was a pleasant looking man of thirty, neither tall nor short, thin nor stout, one could be sure that he had exchanged football for golf, and that he had a creditable war record; equally sure that he was not serving as commander of his American Legion post, nor yet chairman of the Red Cross committee. His pupils recited creditably on the whole, though the visitor felt, rather than observed, a certain air of surprise among them, and she noted that

at least half the class took no part in discussion or recitation, but, while perfectly decorous, preserved an air of detachment, like observers at a rather interesting demonstration. Miss Smith wondered if it would be their turn next day to bear the burden of the work, or if they were expected to absorb passively any education with which the atmosphere might be charged.

Having thus got the lay of the land, next day Lucy Ann Smith entered the same building unannounced. Unseen of any she took from her handbag the moonbeam veil and wrapped it about her, careful to let it touch the floor, so as to conceal her tan oxfords no less than her spring hat. She glided through a corridor, deftly avoiding casual passers-by, noting as she went along on every hand interested pupils and skilful teachers busily at work. But none of these admirable workshops of education delayed her; for none contained candidates. Her only anxiety was as to how she should get into Room 329 if the door should be closed.

Fortune favored the brave; the rear door of Mr. Belden's room was wide open. Gliding noiselessly in, she sat at an empty desk and perceived that her presence was absolutely unsuspected. The attitude of the teacher was a little more easy and careless than on the day before. In fact ease and carelessness seemed to be the keystones of his teaching. The same pupils as on the previous day carried on the recitation, so far as it was carried on at all. Mr. Belden was soon reminded of a story which both he and the pupils considered very funny. That and the appreciative merriment with which it was greeted took up ten minutes of the period. One of the most intelligent girls asked him a question of which it was impossible to suppose that she did not know the answer; but he explained the matter at length, with humorous illustration which aroused appreciation as before. The hands of the electric clock ticked on and in the last five minutes the teacher obligingly summarized the lesson himself. He gave out the next assignment on the stroke of the bell, so hastily that Miss Smith foresaw that "I didn't understand we had that" would be a useful and valid excuse next day for all but the most conscientious—or the most eager to pass the College Board examinations. For herself, removing her veil the moment the room was empty, she crossed the name of Belden from her list.

The next morning found her in a large manufacturing city, from which so ardent recommendations had come to her regarding the brilliancy of a certain teacher that she felt that either here was a woman who must be secured at any price—or else that, for some reason, the Brewsterville school board thought that they would not selfishly deprive another town of her services. The lady's name was Rowena D. Doughty, and as Miss Smith passed through the corridor, accompanied by an attentive youth whose task it was to make visitors welcome, she heard a girl's voice say: "Company today. Oh, I hope Rowdy-dow doesn't call on me. She's worse when there's company."

Miss Doughty was a handsome woman, small, well-dressed, aged somewhere between thirty and forty. The vivid crimson of her lips and cheeks was evidently a gift of nature; for her color rose and fell charmingly, and her short black curls boded with every motion of her birdlike head. She pounced upon her pupils like a shriek upon baby sparrows, and made fun of them unmercifully when they blundered. An awkward boy of 14, who was evidently trembling in his shoes, became hopelessly mixed as to the difference between restrictive and non-



restrictive clauses. Every blunder of his brought out a sarcastic word; but when another boy, unmolested for the time, ventured to laugh at one of his teacher's sallies she turned on him cruelly with the words, "What are *you* laughing at? You don't know anything, never did, and never will. You are the original pinhead. An awkward girl, evidently in abject terror of being the next victim, let her mouth drop open from sheer fright. "Shut your mouth, Emeline," said Rowdy-dow, "or the flies will think you have opened a subway."

"That is not the woman for me," thought Lucy Ann Smith, as she walked out of the building. "Her teaching was brilliant in many respects. Many of her students are profiting by it. Some evidently admire and even love their teacher; but I will not assume the veil for her, nor will I endeavor to deprive this metropolis of her services that they so highly appreciate. If I had a child I should consider it a calamity if he had to be taught by that woman."

Recommendations had come on behalf of two teachers, a man and a woman from a residential town not far distant from her own home, and thither Miss Lucy betook herself, by train and trolley. The superintendent of schools, an old acquaintance, showed her through a building which dated from the eighteen-seventies, but was still substantial and not inconvenient, though vaguely smelling, in spite of surface cleanness, of assorted races of mankind. He showed off teachers, system, and school admirably; a basis of orderly planning was seen to be built upon by the individual initiative of the teachers combined with a high degree of school citizenship among the pupils, who seemed to be able to form plans both of thought and action for themselves, not merely to follow the leadership of their teachers.

Miss Lucy half resolved to recommend the candidates whom she had seen without further investigation; but the same spirit of caution which had caused her at seven to estimate carefully the distance from the shed-roof to the ground before making her jump, gave her pause. Next morning, therefore, she retraced her journey of the day before, entered the schoolhouse of the seventies as inconspicuously as possible, and, enmeshed in the woven moonbeam, dropped into a vacant chair sufficiently removed from Miss Wallace's desk to be out of danger of inadvertent collision.

Miss Wallace was probably 45 years old, endowed with the refinement of old New England together with a pleasant originality that was all her own but the refinement carried with it a courtesy which was perhaps faultily faultless, under the circumstances, and her originality of thought could be expressed only in slow and labored phrase. That which called for a courtesy not quite so punctilious was of a class of 31 boys of Latin, Slavic, Near-Eastern, African, and New England-Hibernian ancestry, and of far from labored speech.

"To what circumstances do you ascribe the haunting nature of the old chantey which Stevenson introduces with so great effectiveness into *Treasure Island*?" asked Miss Wallace.

Abe Worowolska, who had come over from Warsaw quite recently, grinned amiably and replied. "Wa'n no chantey in my book."

Just then he found it prudent to dodge an eraser that came hurtling through the air, executing the movement with such success that the missile hit transplanted Italy, instead of Poland, in the person of Giovanni Nitti, who shrieked as loudly as was prudent considering the near neighborhood of the principal's office.

"Cut out yer yells; here comes old Pink," announced Isador Zoborovitch, in a fierce undertone. Isador utilized the front seat, to which he had been assigned in the interests of good

order, as a look-out station, thus undoubtedly achieving to some extent the purpose for which he had been therein placed, though not exactly in the manner intended.

When Mr. Pinkham, the principal, entered the room he found, thanks to Isador's warning, the class attentively listening to Joseph O'Neill who was expounding a very interesting theory in regard to the incorporation into *Treasure Island* of

"Fifteen men on a dead man's chest."

"Miss Walz-z," said the smiling Abe, as the principal left for parts unknown, "I didn't know that song was be a chantey. Mademoiselle Fluery she learn me a chantey was a rooster."

Cock-crows from every quarter of the room greeted this explanation. The teacher looked

pained, but preserved her own dignity perfectly. Miss Smith made her escape, partly because she had seen enough, but chiefly because she saw evidence that a barrage of crayon would come next, and she did not wish to risk a rent in her precious veil. She foresaw that the sudden appearance of an eye or an ear apparently unsupported by other corporeal substance would lead that effervescent group to test the reality of such apparition by well directed missiles, the effect of which might be painful as well as embarrassing.

Walking down the corridor, still veiled, she paused long enough upon the threshold of Room 26 A, the domain of the other candidate, to note that two rows of students in the back seats were studying algebra with a diligence that

(Continued on Page 135)

## A Salary Schedule for Teachers

Prof. E. L. Abell, Terre Haute, Ind.

No attempt is made in this article to discuss the weaknesses of present salary schedules for teachers, but the outline presented is an attempt to eliminate some of them.

The writer holds that a satisfactory salary schedule must be based upon the following principles:

1. It must combine stability and flexibility by providing definite guarantees to teachers for reasonable periods of time and by providing for adjustments to meet the changing conditions of supply and demand.

2. Salaries must be computed from a common basis in each type of school position. The proper basis for such computation is held to be the current salary paid beginning teachers who satisfy the minimum requirements. It may be considered to be the market value of the services of the beginning teacher in any particular kind of school work. All other services are relative to these and all other salaries can be expressed in percentages if the current beginning salary is made the basis or one hundred per cent.

3. A salary schedule must be so automatic in its working that any teacher at any time can know what salary may be expected the following year with the possible exception of increases due to rating for success.

4. A salary schedule must be so adjustable as to apply in principle to every teacher, principal and supervisor in the system. Emergency departures from the schedule must be temporary only.

5. The three large factors of training, experience and efficiency must be taken into account. The weighting given to each may vary in different school systems but within any system it must be uniform. The weightings given herewith are merely suggestive. Many adjustments may be made while still preserving intact the principles upon which the schedule is based.

### A Salary Schedule Outline

**Basis:** Every three years the board of education shall adopt for each type of school position minimum requirements and a basic, or minimum, salary which shall remain unchanged for the ensuing three-year period. This basic salary shall be used in computing all other salaries and increases due to the three factors of training, experience and success shall operate independently of each other.

**Experience:** Teachers shall receive for the first year the current basic salary, for the second year the current basic salary plus ten per cent, for the third year the current basic salary plus fifteen per cent, for the fourth year the current basic salary plus twenty per cent, for the fifth year the current basic salary plus 25 per cent, and every fifth year thereafter they shall receive an additional increase of five per cent of the current basic salary. All such percentage increases for experience shall be permanent.

**Training:** For each complete year of college training above the minimum requirements teachers shall receive an additional ten per cent increase. Such increase shall always be ten per cent of the current basic salary. Such additional training must be in a college or university of approved standing. An equivalent in travel may be accepted by the board of education in lieu of one year of additional college credit. All such percentage increases for training or its equivalent in travel shall be permanent.

**Success:** Each year all the teachers, principals and supervisors in the system shall be given a rating in success and a ranking made according to this rating. Those ranking highest, not to exceed ten per cent of the entire force, shall constitute Class A and shall receive an additional increase of twenty per cent of the current basic salary the following year. The next lowest group in the order of ranking, not to exceed 50 per cent of the entire force, shall constitute Class B and they shall receive an additional increase of ten per cent of the current basic salary the following year. All below Class B in the order of ranking shall constitute Class C and they shall receive no special increase for success. All such ratings with the accompanying increases, if any, shall be effective for one year only.

**Sabbatical Year:** After every six years of continuous service in this school system a teacher shall be entitled to one year's leave of absence. If the year is spent in full college work approved by the board of education or its equivalent in travel, half the teacher's previous year's salary shall be allowed.

**Advanced Credit:** Teaching experience earned elsewhere shall be given full credit in computing increases due to experience: Provided, that in no case shall part years of service either in this school or elsewhere be credited.

**Revision:** Teachers shall be given one year's notice of any change in the provisions of this schedule other than the triennial setting of basic salaries as herein provided.

### Salary Blank

Smith, Clara, Teacher. For Year 1925-26. Position, Fourth Grade, Lincoln School. Basic Salary, \$1,100. Actual Salary, \$1,650. Years Experience, 3. Training—Minimum plus 2 Years, Rating B.

Percentage Increases due to { Experience, 20  
Training, 20  
Success, 10

|                           |         | Computation Table<br>Years of Experience |     |     |              |               | 14-18<br>incl. etc. |
|---------------------------|---------|--|-----|-----|--------------|---------------|---------------------|
|                           |         | 1  | 2   | 3   | 4-8<br>incl. | 9-13<br>incl. | 14-18<br>incl. etc. |
| Training<br>Minimum       | Class A | 30%                                      | 35% | 40% | 45%          | 50%           | 55%                 |
|                           | Class B | 20%                                      | 25% | 30% | 35%          | 40%           | 45%                 |
|                           | Class C | 10%                                      | 15% | 20% | 25%          | 30%           | 35%                 |
| One Year<br>Additional    | Class A | 40%                                      | 45% | 50% | 55%          | 60%           | 65%                 |
|                           | Class B | 30%                                      | 35% | 40% | 45%          | 50%           | 55%                 |
|                           | Class C | 20%                                      | 25% | 30% | 35%          | 40%           | 45%                 |
| Two Years<br>Additional   | Class A | 50%                                      | 55% | 60% | 65%          | 70%           | 75%                 |
|                           | Class B | 40%                                      | 45% | 50% | 55%          | 60%           | 65%                 |
|                           | Class C | 30%                                      | 35% | 40% | 45%          | 50%           | 55%                 |
| Three Years<br>Additional | Class A | 60%                                      | 65% | 70% | 75%          | 80%           | 85%                 |
|                           | Class B | 50%                                      | 55% | 60% | 65%          | 70%           | 75%                 |
|                           | Class C | 40%                                      | 45% | 50% | 55%          | 60%           | 65%                 |



# Teacher Turnover and the Placement Problem

Hollis P. Allen, Stanford University, California

The time of year when teachers become restless and when schoolmen are combing the field for new teacher material is upon us. Every school administrator knows that the burden of seeking new teachers comes during the summer months. The curve of placement by teachers' agencies (Chart 1) is also the curve of teacher hiring by school officials. Among the eight agencies from which data was collected for this chart, 58 per cent of the placements were during the months of June, July, August and September.

Administrators have realized, as have teachers, that many of the selections of the past have been misfits. Also, schools have often been unable to recompense sufficiently many of those teachers who have filled their positions with utmost satisfaction. The result, in either case, is another year of large teacher turnover throughout the country. The time is, therefore, ripe for a consideration of the inter-relationship between the problem of teacher turnover and that of teacher placement.

The term "placement" has been used to cover a variety of meanings. Most of our so-called "placement" bureaus or "appointment" bureaus are nothing more than recommendation and nomination organizations, or clearing houses between employer and employee. Of all teachers employed through the various "placement" organizations, probably 65 per cent receive real service, while the remaining 35 per cent are merely told of the existence of vacancies. By the very nature of things the final placement and selection of teachers falls to the employing official of the school, although occasionally that official may desire to delegate his power to a bureau. Usually the prime function of a "placement" organization is to bring teacher and administrator into touch with each other, assisting in a possible contract between the two by giving each information concerning the other. All too often this information is on one side only, or biased through the desire to serve the teacher rather than the school. The two most important functions, then, of teacher placement are, first, the introduction between candidate and employing official, and second, the interchange of information concerning the candidate and the position.

Turnover has been, and always will be with us, at least so long as teachers die or marry. We have been accustomed to compute turnover in terms of per cent; i. e., the ratio of new teachers in a school or system during the year to the total teaching positions of the school or system. In order to avoid confusion concerning turnover, it is essential to know what portion is due: first, to growth and expansion of the schools; and second, to replacements for those who leave the profession through death or otherwise; and third, to the movement of teachers from one position to another; i. e., the "fluidity" of the profession.

We have held the false belief that all turnover, as we have conceived it, is evil. That portion, on the contrary, which is due to growth and expansion of the schools is to be commended; that due to death is unavoidable (unless due to neglect on the part of the school); that portion caused by those who voluntarily leave the teaching profession is, to a large extent deplorable, although subject to a certain amount of correction; while the turnover due to "fluidity" could be and should be eliminated. Although it is not the desire of this discussion to minimize the evils of teacher turnover, it is our hope that a study

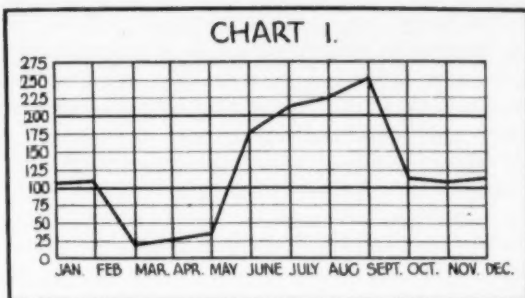


CHART 1.  
Placements of teachers by eight commercial teachers' agencies in California from April, 1921, to March, 1922. Total placements for this period were 1,481.

of turnover will assist in unveiling it so that we may be able better to cope with its problems. In order to make this study more concrete we shall consider the following actual case.

## Teacher Turnover in California High Schools

In the high schools of California for the school year 1921-22, over one-third of the teachers were new in their positions, while nearly five-eighths had been in their schools less than two years. Referring to Chart 2, that portion in black represents the percentage of teachers who had been in their positions a year or less, while the shaded portion indicates those who had tenure between one and two years. It is of interest to note the variation in tenure and turnover between small and large high schools.

On first impression these figures seem very large, especially when it is realized that, in general, secondary school conditions in California are very favorable and that salaries are relatively high, even in the outlying districts. However, a close analysis of the 35 per cent group for the state at large who had tenure of one year or less will reveal that all of the condition we have called turnover is not to be deplored.

1. *Turnover due to growth and expansion of schools.* In the year 1920-21 there were 6,549 high school teachers (positions) in California, as compared with 7,284 in 1921-22. The increase in teaching positions, then, due to growth and expansion of the schools was 735, or 10.1 per cent of the 1921-22 teacher total.

Similarly computed, the average California high school turnover due to growth and expansion

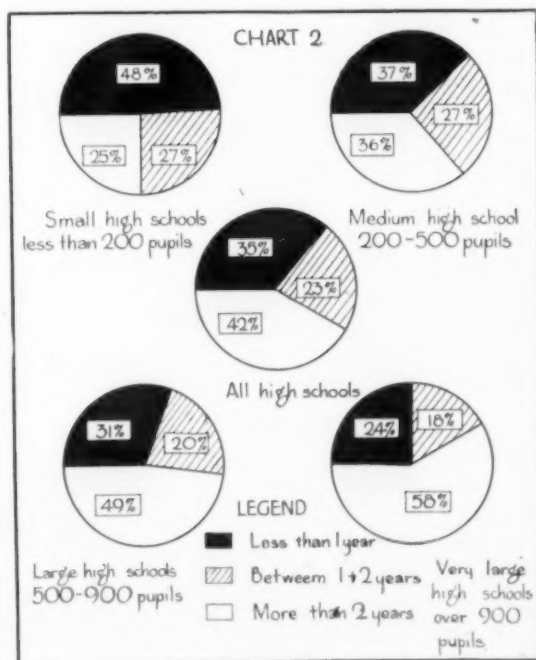


CHART 2.  
Teacher tenure in California High Schools, for the school year 1921-22, from data collected by committee of fifteen. California High School Teachers' Association—1923.

sion for the five-year period of 1919 to 1924 has been 11.4 per cent annually. Assuredly, the fact that in 1921-22 nearly one-third of the turnover was due to growth and expansion of the schools is a factor which we must know in order to understand the problem.

2. *Turnover due to replacements for those who leave the teaching profession.* A study based on figures of the California Teachers' Retirement Salary Board<sup>1</sup> gives the following interesting data. In 1921-22 there were 24,823 public school teachers in California, of which approximately 1,200 were exempt from contributions for the retirement salary, leaving a total of 23,623 for whom record was made. In the following year 3,162 of the 23,623 did not contribute, showing that 3,162 had left the employment of the schools of the state during this period of one year.

In other words, between 1921-22 and 1922-23 thirteen per cent of the teachers had left the profession. Actually, the figure might be somewhat higher than this, for the 1,200 who did not contribute were all in service prior to 1913 and thus more likely to withdraw because of age. Although observation would lead us to believe that elementary teachers leave the profession at a greater rate than do high school teachers, it approximates accuracy to state that thirteen per cent of the teachers of California high schools withdrew from the profession in the annual period for which the data was compiled. As this was during a representative year we may state that thirteen per cent of the teaching staff must be new each year as replacements to take the positions of those who leave the profession.

3. *Turnover due to "fluidity" of the teaching profession.* That turnover which is due not to growth or expansion nor to replacements may be charged to "fluidity." In the high schools of California for the year 1921-22 this "fluidity" was responsible for 11.9 per cent of the total number of teachers being in first year positions. This is determined by deducting the 10.1 per cent due to growth and expansion and the thirteen per cent due to replacements from the total turnover of 35 per cent.

| Item  | Per Cent | No. Teachers |
|---|----------|--------------|
| 1. Due to growth and expansion.                     | 10.1     | 735          |
| 2. Due to replacements.....                         | 13.0     | 943          |
| 3. Due to "fluidity".....                           | 11.9     | 871          |
| Total turnover .....                                | 35.      | 2,549        |
| Teachers with tenure between one and two years..... | 23.      | 1,675        |
| Teachers with tenure over two years .....           | 42.      | 3,060        |
| Total teachers .....                                | 100.     | 7,284        |

| Cause  | Per Cent of Total Turnover |
|--|----------------------------|
| Turnover necessary for replacements....                  | 37                         |
| Turnover due to "fluidity".....                          | 34                         |
| Turnover due to growth and expansion of the schools..... | 29                         |
| Total turnover .....                                     | 100                        |

## A Proper Definition of Turnover

The above discussion clearly presents the difficulties of using "turnover" as we have in the past. When our figures of turnover have included accessions due to growth and expansion we have no standardization of the term, because of varied expansion rates throughout the country. The elimination of the growth and expansion element from our definition of turnover would make the term more comparable and more indicative of an undesirable situation. In order that turnover be composed of "replacements" and "fluidity" alone, we might well revise our concept with the adoption

<sup>1</sup>Thirty-first Biennial Report of the Superintendent of Public Instruction, State of California.



of the following formula for its computation:  
(New teachers)—(New positions) = Turnover (in per cent)

Average number of positions

#### Teacher Turnover in the Country at Large

An estimate of the teacher turnover in the country at large can at best be little more than a matter of guess. Various studies have been made which would indicate that the high school turnover in California as given above was abnormally low. Almack estimated that in Oregon the annual turnover varied from an average of 44.3 per cent in the large districts (excepting Portland) to 61 per cent in the small districts.<sup>2</sup> In another study he estimates that the country as a whole uses 150,000 new teachers (without experience) each year.<sup>2</sup> This would indicate that twenty per cent of the entire teaching body of the country was needed each year for growth and expansion and as replacements to take the place of those who leave the profession. The Public School Teachers' Retirement Board indicates that sixteen per cent of the staff is needed each year for replacements alone.<sup>2</sup> A number of studies over the country have placed the average teaching life of those who enter the profession as between three and six years.

#### Turnover and Placement

Regardless of the exact figures, it is evident that teacher turnover in the schools of America is very large. Someone will find it necessary to employ the 150,000 new teachers next year. Each school administrator in all probability will have his portion. The placement of such an army, to say nothing of the "mobile" teachers who are already with us, is a problem which the schoolmen of the country may face with great concern.

It is in the field of "fluidity" turnover that placement should achieve its most telling results. Proper placement can never bring this to zero unless salary schedules and conditions of teaching are so improved that teachers will desire to stay in positions longer than one or two years. "Fluidity or mobility characterize the teaching profession to a much greater extent than any other learned profession."<sup>2</sup> In a recent questionnaire to California high school teachers who were new in their positions this year the question, "Have you found it advantageous to stay in a position more than two years?" was asked. It was surprising that the return split itself just fifty per cent in the affirmative and fifty per cent in the negative! If half of the shifting teachers of the country have found it disadvantageous to stay in a position more than two years we cannot entirely blame the placement organizations for failure to furnish us with more permanent candidates. As long as conditions are such that teachers can find "better pasture across the fence," the teaching profession will retain a portion of its fluidity.

However, there is no doubt that considerable change among teachers is the result of poor placement and of restlessness caused by the constant flaunting of that "better pasture" by those who are interested in teaching turnover because of the commercial gain attached. The writer has compiled data which tends to show that certain types of placement organizations do actually decrease tenure, while other organizations encourage teachers to stay in their positions for the longer period of time. School men will do well to give the latter organizations a chance to make nominations for their vacancies. To present the situation by representative data at hand; among two placement bureau in connection with collegiate grade institutions of California one has placed experienced high school teachers, 45 per cent of whom have been in their previous positions more than two years, while the corresponding figure for the other

bureau has been fifteen per cent. It is evident that the first of the two bureaus is making a definite effort to keep its clientele in positions for the longer period of time. In general, teachers employed who have made application on their own initiative tend to stay in positions longer than those placed through the various placement organizations.

Proper placement may also hope to reduce turnover due to replacement for those leaving the profession, although to a lesser extent than in the field of "fluidity." Teachers who are able to obtain positions for which they are qualified by preparation and temperament, where they can be happy and render real service, will tend to remain in teaching work longer. Placement organizations which encourage teachers to attempt work for which they are not qualified, or which strive to place them in localities which will not be congenial, should be discouraged by school men. Such placement leads only to increased turnover.

#### Costs of Teacher Turnover

Industries turning out products which may be measured financially have been much interested in computing costs of labor turnover. The following table (Table 3) was compiled in 1919 by Magnus W. Alexander, then executive director of the National Industrial Conference Board.<sup>3</sup> It claims to be an estimate only, but for our purposes it will serve to show what business has attempted to accomplish in the way of computing turnover costs.

Although it would be impossible to make an accurate estimate of turnover costs in the

#### 3. Cost to the children.

- A. Reduced production in subject matter and spiritual growth. ....
  - B. Retardation,—spoiled work. ....
- What will the total be? .....

#### What to Do About It

Mr. E. E. Lewis, in his recent book on the "Personnel Problems of the Teaching Staff," offers five suggestions for decreasing turnover and increasing tenure. They are given in his order of importance:

1. Hire only teachers of high professional training, ability, interest, and experience.
2. Pay teachers progressively so long as they continue to improve in service.
3. Improve local living and social conditions.
4. Obtain a tenure law protecting good teachers, but protecting the children and taxpayers against inefficient teachers.
5. Better organize and standardize the service of placement agencies.

It will be noted that this list is made from the point of view of the city administrator. For the smaller schools which are more dependent on placement organizations for teacher candidates, it is evident that the first and fifth suggestions will merge at the head of the list. Valuable as such a list of suggestions is, it must be admitted that the problems it puts before the administrator are very difficult of solution. It would be of interest to hear Mr. Lewis' program for carrying out these suggestions.

The easiest place to dam a river is at its source. Similarly the problem of teacher turn-

Table 3  
Estimate of Turnover Costs in the Metal Working Industries<sup>3</sup>

| Class of Labor   | Hiring | Instruction and Wear | Reduced Production | Spoiled Work | Total   |         |
|--|--------|----------------------|--------------------|--------------|---------|---------|
| Highly skilled mechanics.....  | \$0.50 | \$ 7.50              | \$10.00            | \$20.00      | \$10.00 | \$48.00 |
| Mechanics with less skill, needing year or two to attain proficiency.....  | .50    | 15.00                | 10.00              | 18.00        | 15.00   | 58.50   |
| Semi-skilled pieceworkers, attaining fair proficiency in a few months..... | .50    | 20.00                | 10.00              | 33.00        | 10.00   | 73.50   |
| Laborers.....  | .50    | 2.00                 | 1.00               | 5.00         |         | 8.50    |
| Clerical force.....  | .50    | 7.50                 | 1.00               | 20.00        |         | 29.00   |

teaching profession, one might realize a portion of the expense if he were to compute costs on the following items:

#### 1. Financial costs to the school.

- A. Investigation of many unqualified candidates. ....
- B. Hiring of new teachers; time, travel, correspondence, interviews, etc. ....
- C. Extra supervision necessitated by lack of knowledge concerning local standards, conditions, etc., on the part of the new teachers. ....

#### 2. Financial costs to the teacher.

- A. Fees for placement service, travel, correspondence, interviews, etc. ....
- The above, although a portion of the financial costs, are the smaller part of the teacher turnover expense to the school and community. The truly significant items are:

<sup>3</sup>"The Turnover of Labor," Bul. No. 46, Federal Board of Vocational Education, November, 1919.



over may best be dealt with at its foundation. How then, may school administrators improve turnover conditions?

1. *By a study of turnover as it applies to the local situation in an attempt to find and correct its causes.* Just as a poor attendance situation may be improved through an analysis of absence and the subsequent correcting of its causes, so the same means may be operative in the problem of turnover.

2. *By a more intelligent use of the placement means at hand.* Give the various placement organizations an opportunity to submit candidates. Attempt to determine which organization gives the best service; which gives the most reliable information concerning candidates; which carries the best trained candidates, etc. Such considerations are important, especially when it is realized that there is much variance in these matters.

3. *By a concerted movement on the part of schoolmen to improve methods of being placed in touch with desirable teacher material.* While many schoolmen have been almost entirely dependent upon placement organizations for their teachers, they have shown a singular lack of interest or concern over the methods or management of such organizations. Placement service is a vital part of the school system, and as such it is imperative that schoolmen give its problems more consideration.

When turnover can be figured concretely in dollars and cents we heed it and deplore it, but when it is paid in retarded development of the youth in our communities it is altogether too often overlooked. We need a more generous consideration of better teachers,—better because they have been chosen more wisely through a more intelligent use of various placement means.

<sup>2</sup>E. E. Lewis, "Personnel Problems of the Teaching Staff."



## School Lighting

Kirk M. Reid, Illuminating Engineer, Nela Park, Cleveland, O.

In Biblical times a man named Esau sold his birthright for a mess of pottage—traded a rich inheritance for a morsel of meat. It was a poor bargain, to say the least. Esau may have been very hungry, but he surely had no conception of the relative value of things. He lived entirely for the present, and without the slightest thought for the future—but before we criticize him too sharply let us see if our own generation does not practice false economies that are almost as bad as Esau's unthinking blunder!

Take eyesight. We live in a visual world, and our sense of sight is a valuable birthright. Yet we abuse it severely. We call upon our eyes to function under lighting that we know is poor, and if the resulting eyestrain causes general fatigue, headaches, nervousness, indigestion, or even permanent impairment of vision, in a way it serves us right. We know better.

With our children the proposition is different. Their eyesight—their priceless birthright—is entrusted to our care, and it is clearly our responsibility to see that nothing impairs it unnecessarily. In general, we want our children to be equipped as well as possible for the competitive game of life. Education is a means to this end, but education at the expense of good vision tends to defeat its basic purpose, for vision is highly important in almost all kinds of work.

### Present Conditions

Recent extensive surveys have shown that at least 25 per cent of our school children have defective eyesight. In the lower grades the percentage is less than this, but there are marked increases in the number and extent of eye defects as the children progress through their school life. Improper school lighting—both natural and artificial—contributes largely to this condition.

In a great majority of our schools the artificial illumination especially is inadequate or poorly distributed, and glaring light sources are all too common. Under such lighting in the schools—and with correspondingly poor lighting in the homes—the children do not see clearly, or else they strain their eyes in order to see. In either case they are studying under a serious handicap which cannot help but retard their educational progress. Furthermore, eyestrain among the boys and girls of today means impaired vision among the men and women of tomorrow. Widespread investigations show that at the present time over half of our adults have defective eyesight—many of us have indeed lost part of our birthright, either because we did not have good lighting, or because we have abused our eyes unnecessarily.

### Lighting Economies

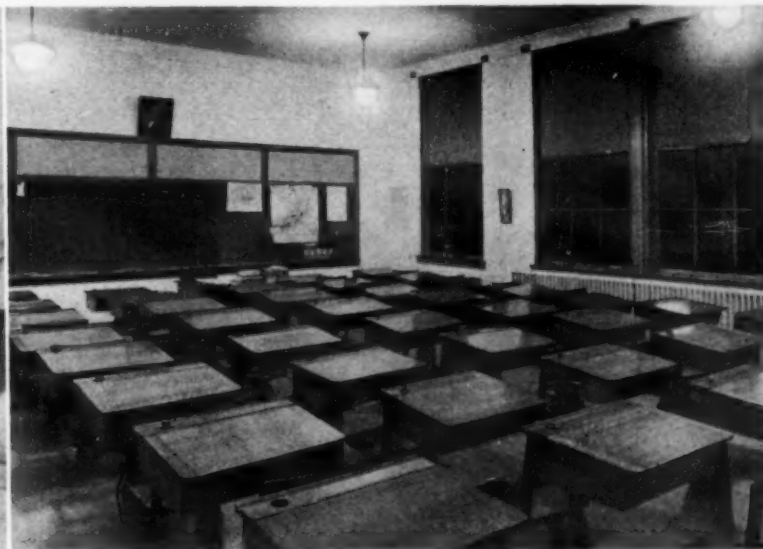
Aside from the enormous personal losses

which result from imperfect vision, both during school life and afterward, school lighting may be considered as one of those cost items which must be so budgeted that maximum value will be obtained from the expenditure of school funds. Purely from this standpoint of the actual dollars-and-cents cost of operating our educational system, if poor lighting and the resulting imperfect vision prevents annually only two per cent of our children from passing, the cost to the state of repeating the year's instruction for these children is as much as its total school lighting bill for the entire year. And where poor lighting has caused eye defects among school children, in later life their earning capacities are thereby reduced, which in the aggregate amounts to an immense economic loss to them and, therefore, to the nation. Clearly, the real cost of poor lighting is stupendous.

Even where the value of good lighting is thoroughly appreciated, progress in improving school lighting conditions is seriously hampered because it is often the general impression that the cost of proper lighting is prohibitive, or nearly so. Yet the total cost of a good artificial lighting system for a school rarely exceeds the cost of the ornaments which are frequently placed around the front entrance. And the average cost of electric current and lamps to provide good artificial lighting in a schoolroom during the periods of insufficient daylight, is less than the cost of the pencils and tablets used by the children in the room. Good lighting is



THE LIBRARY DESERVES UNIFORM LIGHTS, WITHOUT GLARE, SO THAT THE READERS MAY WORK WITHOUT EYE-STRAIN OR FATIGUE.  
(Library in the Joliet Township High School, Joliet, Ill.)



A CLASSROOM WELL LIGHTED BY TOTALLY ENCLOSED UNITS OF LARGE DIAMETER. LUMINARIES OF THIS TYPE PROVIDE EXCELLENT BLACKBOARD AND WALL ILLUMINATION.

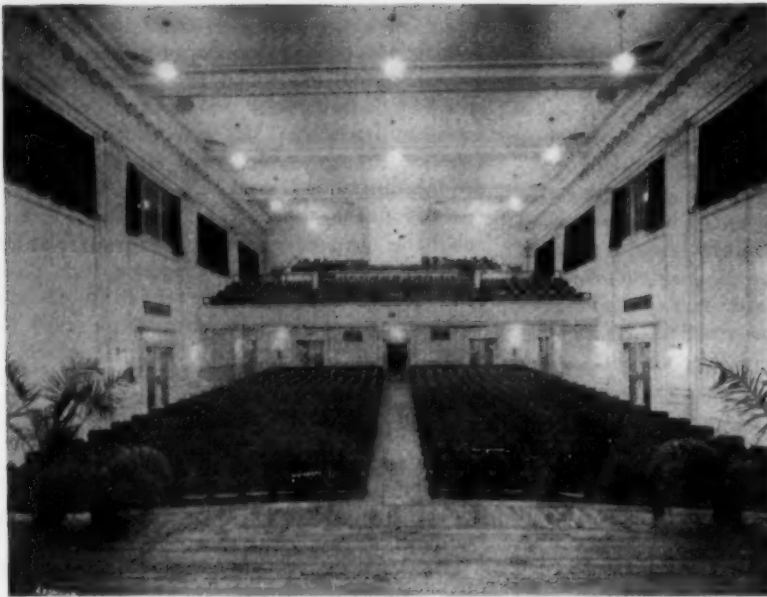


THE MECHANICAL DRAWING ROOM REQUIRES WELL SPACED UNITS WHICH CAUSE THE LEAST SHADOW ON THE DRAWING BOARD. IN-DIRECT OR LARGE ENCLOSED UNITS ARE MOST SATISFACTORY.



LABORATORY ILLUMINATION IS EXCELLENTLY PROVIDED BY ENCLOSED OR SEMI-ENCLOSED UNITS.





VARE JUNIOR HIGH SCHOOL, PHILADELPHIA, PA.  
(Holophane enclosed units.)



GALION HIGH SCHOOL, GALION, OHIO.  
(Beardslee direct-indirect ornamental chandeliers.)

indeed inexpensive, especially in view of its far-reaching benefits. If parents and school boards realized these facts, there would soon be a marked improvement in school lighting conditions, for it is evident that the small expenditure for proper school lighting pays enormous dividends, both present and future.

The growing use of schools for night courses makes it doubly important that they have good artificial lighting, since the night classes are of necessity entirely dependent on artificial illumination.

**Code of Lighting School Buildings**  
For those who are desirous of obtaining

proper lighting for any school, complete and authoritative information from an unbiased source is available. A new Code of Lighting School Buildings has been recently prepared by a committee consisting of official representatives of twenty organizations and societies

(Continued on Page 148)



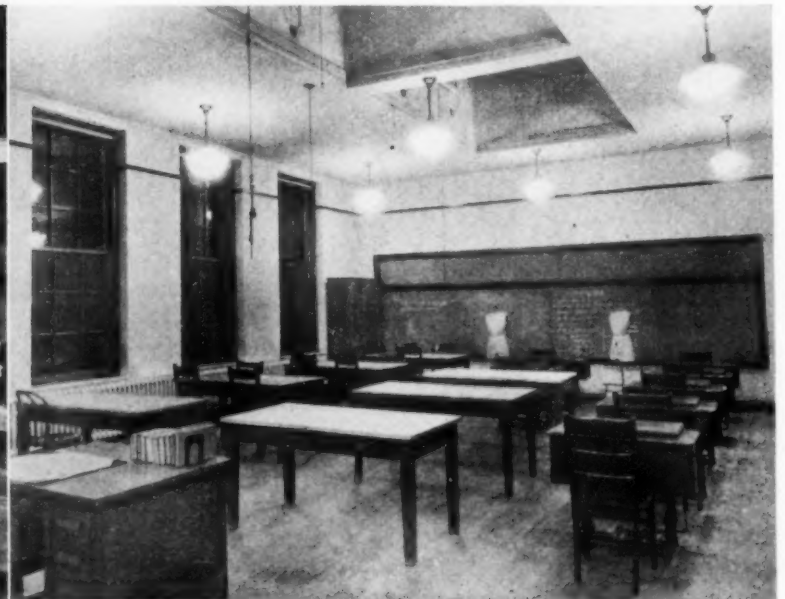
A SATISFACTORY GYMNASIUM INSTALLATION.  
(Marquette University, Milwaukee.)  
The units are spaced eighteen feet apart, 22 feet above floor and provide 8 foot-candle illumination.



CAFETERIAS DESERVE UNIFORM LIGHT OF RATHER LESS INTENSITY THAN CLASSROOMS OR WORKSHOPS.  
(Manual Training High School, Peoria, Ill.)



THE SCHOOL SHOP REQUIRES FIXTURES WHICH WILL CONTINUE EFFICIENT IN A DUSTY ATMOSPHERE.  
(East Technical High School, Cleveland, Ohio.)



THREADING NEEDLES, ONCE AN EYESORE FOR GRANDMA, IS NOW "EASY AS PIE" FOR GIRL PUPILS OF THE SEWING ROOM.  
(Miles Standish School, Cleveland, Ohio.)



## School Bonding in Ohio

Jesse L. Ward, Bucyrus, Ohio

(Concluded from April)

### PART III

#### CONCLUSIONS AND RECOMMENDATIONS

There seems to be no adequate check on the growth of bonded indebtedness in Ohio. The Ohio State Auditor, in his annual report for 1915, makes the following computation: "Over 4,500 independent governmental boards, under 236 various and conflicting sections of statute law are given authority to create over two hundred kinds of public debt and the limitations are so indefinite and valueless, that the restrictions only become operative after the danger point is passed. A total of 780 city and village councils, 2,700 boards of education, 1,373 boards of township trustees may create debt for every conceivable purpose under a mass of obscure statutes with inadequate limitations."<sup>1</sup>

House Bill No. 599, passed by the Ohio State legislature April 6, 1923, did check the growth of floating indebtedness by limiting the borrowing of money by boards of education, and provided for the funding of existing indebtedness. That there seems to be no adequate check upon the issuance of bonds for permanent improvements and equipment is evidenced by the reports to the Bureau of Research of Ohio State University.

November 28, 1923, Harrison, Hamilton County, approved a bond issue of \$110,000 for the construction of a new high school.

November 28, 1923, Marietta, the bond issue for the high school has been carried by a large majority, nearly four to one.

November 28, 1923, Warren reports that bond issue for the new high school carried by a large majority.

November 28, 1923, the bond issue at Upper Sandusky carried four to one.

November 28, 1923, the bond issue for \$250,000 for the new high school building at Bellevue was carried by a large majority.

November 28, 1923, the bond issue for \$130,000 carried in Nelsonville by a majority of two votes.

November 28, 1923, the bond issue of \$800,000 for the new high school building in Cleveland Heights carried by a large majority.

November 28, 1923, East Youngstown voted favorably on a \$350,000 bond issue for the purpose of erecting a high school.

January 9, 1924, Brooklyn Township passed a bond issue for \$75,000 at the recent election.

January 9, 1924, bond issues floated in Lakewood during the past five years: School building bonds, \$1,125,000; school building bonds, \$600,000; school building bonds, \$700,000; school building bonds, \$200,000.

January 9, 1924, Delphi Township carried a bond issue for \$75,000 to be used in the construction of a new centralized building.

January 9, 1924, bonds to the amount of \$135,000 have been sold to build a new high school and grade building in the Cardington School District.

January 9, 1924, Parma passed a bond issue of \$175,000 for additions to present buildings at the election, November 6th.

The entire list of reports of bond issues floated at the election, November 6, 1923, would be too comprehensive to include here, but sufficient have been enumerated to show that the recent House Bill No. 599, has checked borrowing of money for school purposes only for operating expenses in anticipation of the next tax settlement.

The Griswold Act passed in 1921 aimed to prevent, insofar as possible, the financing of

current expenditures with borrowed money.<sup>2</sup> But the practice has, nevertheless, persisted, and the floating debt in a few cities has reached large proportions. House Bill No. 599 provides for the funding of this existing indebtedness. It remains to be seen whether it is more effective than was the Griswold Act in limiting the borrowing of money by boards of education for operating expenses.

There should be a more adequate check on the creation of debt and the growth of bonded indebtedness in Ohio. The duration of the loans should be determined by the benefits accruing from the expenditures and the rule of equality between the present and the future become the guide. Borrowing is not a public good if it is used as a cloak for perpetual debt. Funding is a deceptive device for the refusal of debt payment. If delay in paying or refusal to pay, is retained, the principle of debt as a financial device is thus repudiated. Good financing and public policy seem to disapprove of the privileges of funding to any and all loans which a state may make. The real cause of the abuse in the use of credit is not necessarily in the amounts borrowed, but in the deferment of payment. The universal privilege of funding is not only uneconomic but leads to waste and abuse.

Borrowing is a means of deferring payment. Often it furnishes an opportunity to shift tax burdens too far into the future. To guard against this, provisions requiring the payment of all loans within a stated number of years have been made a part of constitutions. However, the companion privilege of refunding has accompanied these and has in a large measure negated them. Roughly speaking, each generation should clean its own slate, and pass on to the future a higher level of well-being.

It is the taxpayers of the future who most need the protection of statutory limitations upon the extent of bonded indebtedness. Those of the present have the means of redress in their hands but they have not exercised it. Public opinion is not a sufficient check upon the abuse of the borrowing power, as long term bonds affect the future rather than the immediate present. The present actually appears to profit by the abuse. The situation in Ohio seems to demand a remedy such as has been enacted into law in the state of Indiana. In that state the state tax commission has power to reduce local budgets upon the protest of the citizens of the community, but not to examine and revise local budgets as it sees fit.<sup>3</sup> Bond debt limitations are also fixed at a certain per cent of the total taxable wealth of the local unit.

A program for Ohio in providing sufficient checks upon the increase of bonded indebtedness may well be summed up as follows:

1. Fearless functioning of the present Ohio county budget commission, pending improved legislation as to indebtedness, budget making and accounting.
2. Strict enforcement of House Bill No. 599 to prevent borrowing for operating expenses and guard against the use of bonds for the payment of current expenses.
3. Adoption of legislation requiring the use of serial bonds to prevent abuses connected with the handling of sinking funds.
4. Limitations of bonded indebtedness to a reasonable per cent to the total taxable wealth of the local unit, enacted into law.

5. Election of competent and experienced men to administrative positions in local government.

#### Factors in the Lack of Sufficient Revenue

With a total grand duplicate for 1922 of \$10,406,622,222, in Ohio, the State Tax Commission's Report for 1922 shows that but 7 per cent of the entire property tax was borne by intangibles out of a total tax collection of \$238,450,957.<sup>4</sup> Tangible wealth, therefore, bears the burden of furnishing public revenue for all purposes. The size of the rapidly increasing amount of tax-exempt securities is indicated by the report by the National Industrial Board for 1923. This report based on authoritative records from every state shows that the value of the amount of property in the United States which has been rendered by various means exempt from taxation reached in 1922 the sum of \$54,000,000,000. This represents slightly less than one-fifth of our national wealth and is equal, roughly, to one-third of all property assessed under the general property tax which forms the bulwark of state and local government finance.<sup>5</sup>

Out of 88 counties reporting to the State Tax Commission of Ohio for 1922, fifty counties report tax exempted property of over \$350,000,000. If a complete report could be had from every county in the state, this amount would be greatly enhanced. It is reasonable to conclude that the same proportion of tax exempt securities to property assessed under the general property tax exists in Ohio as for the United States.

The chief source of school revenue in Ohio is the general property tax. The percentage of total income for public education derived from the general property tax for the year 1921-1922 was 84.3 per cent, that from all other sources, 15.7 per cent.<sup>6</sup> It is true therefore that, if Ohio continues to depend upon a general property tax for school revenue, there ought to be some way of bringing this tax exempt form of property more and more into the total taxable base. If the return to a pay-as-you-go basis is to be accomplished and the upward trend of bonded indebtedness halted in the local units of the state, either the taxable base must be enhanced, the rate raised upon the present base, or some new form of taxation levied to produce the necessary revenue for the present rate of expenditure.

It is not within the scope of this paper to enter into the discussion of new forms of taxation yet untried in Ohio, and offer them as a solution for our state financial questions. There are however many students of taxation who favor the plan of the National Tax Association,<sup>7</sup> which is a combined real property tax, personal income and business tax collected at the point of domicile, with no provision for a personal property tax. The sales tax, state income tax and severance tax have been tried and much is claimed for them as fair, just and painless forms of taxation, but more important than the advocacy of any special tax as far as Ohio is concerned is the question of school economics that may be practiced, resulting in the conservation of school funds without reducing the efficiency of the school system. Increased efficiency and the elimination of waste resulting in an increased load on the present tax dollar may be the item that will equal the difference

<sup>1</sup>Cassidy, John R. (Member of the State Tax Commission of Ohio). "Sources of School Money." Proceedings, Second Annual Educational Conference, Ohio State University, p. 122.

<sup>2</sup>Report of the National Industrial Board, 1923, No. 64, p. 66.

<sup>3</sup>Cassidy, John R. "Sources of School Money." Proceedings, Second Annual Educational Conference, Ohio State University, p. 122.

<sup>4</sup>Report: Committee of the National Tax Association, Chap. III, Secs. 11, 12 and 13.

<sup>5</sup>Annual Report of the State Auditor of Ohio, 1915, pp. 12-14.

<sup>6</sup>109 Ohio Laws, p. 336.

<sup>7</sup>Indiana Laws, 1921, p. 640.



between school revenue and expenditure, regain the parity between the two and a sound financial policy.

The question of economies in education is a large study in itself, and in view of the present financial status of the schools of Ohio, it ought to impress school experts everywhere with its vital significance. There is plenty of room in the administration of schools, for the practice of economy and wiser spending. Economies may be effected through an increase of time which pupils devote to study; through improvement of instruction; through the elimination of duplication of work in senior high schools and colleges; through duplication of teachers' work within the school; and at times in the cost of permanent improvements and equipment without subtracting from the permanence and durability of the improvement.

If accounting is done properly, extravagance in the use of supplies in any building or department may be detected. It may reveal that the cost of fuel per 1,000 cubic feet in one school is twice that in another building through a faulty furnace. It may reveal that five pupil recitations in Greek costs a dollar and that nineteen pupil recitations in English cost the same. In that case, when the year is up, ought the board to purchase any more Greek recitations at five for a dollar, when forty pupil recitations in vocal music can be bought for the same money? Cost accounting should help a superintendent to decide whether or not certain activities should be continued.

For example, take the following case study: A city threatens to close the schools for lack of revenue to continue to pay operating expenses. A survey is made of the city schools in question by the State Department of Public Instruction and the following recommendations are made: Reduce the teaching staff by thirteen grade teachers and four high school teachers. Dispense with the clerk-business manager of the board, and of his two clerks who now receive \$4,980 a year, and substitute therefor one \$50 a month clerk who can easily do all the work. Abolish primary, music and cadet supervisors whose combined salaries amount to \$5,000 annually. Cut the school term from nine and one-half months, to nine months, and pay teachers only for time worked,

who now are paid for ten months' work.

These economies, if they may be called that, it was pointed out, would result in a saving to the board of approximately \$63,000, and would enable the schools to operate for nine months, with a surplus of \$20,000 at the end of the year, instead of an estimated deficit of \$43,000. Despite these reductions, it was pointed out, there still would be only 36 pupils for each elementary teacher and 25 for each high school instructor, the average ratio in the state being 32.5.

These economies may have been too drastic. At that rate the 94 cities of Ohio could effect an average economy in operating expense of \$7,000,000 for three months of school or \$21,000,000 for the year. But granted that the 2,700 school districts of the state could effect an average saving of but \$2,000 each for the school year, the spectacle of total yearly school costs jumping from \$94,000,000 in 1921 to \$110,000,000 in 1923 and its consequent additions to the floating indebtedness with eventual funding and increase in the bonded debt, would be eliminated. Waste may not exist in city districts to this extent, and perhaps economy here has been practiced to the point of parsimony and reduced efficiency in the school, but no one doubts that wise economy and saving could be effected in substantial degree.

#### Summary

1. There is need for more adequate checks upon the increase of bonded indebtedness in Ohio.
2. The present rate of the upward trend in school bonding in Ohio is an unsafe and unsound financial policy.
3. The present trend in the increase of tax-exempt securities form of property in Ohio, should be a subject of serious consideration and study, looking to its reduction and final return to the total taxable base of the state.
4. The practice of rigid school economies, the elimination of waste and the conservation of school funds can maintain the high standard of public education in Ohio and may provide adequate means to the end of resuming a pay-as-you-go basis and the decrease of the growth in the bonded indebtedness of the school districts.

## A Principal's Observations on Intelligence Testing

E. F. Orr, Hobart, Ind.

About two years ago the administrative officers and faculty of the Hobart high school decided upon a program of intelligence testing in conformity with the latest movements in education. At that time there were about one hundred and fifty pupils enrolled.

The tests used were the Stanford Revision of the Binet-Simon Scale and the Otis Group Intelligence Scale. All the teachers cooperated to the full extent of their time and ability in administering, scoring, and correlating the tests. The time required for this purpose was about two weeks.

A graph was made for the whole school as well as for each of the four classes, which showed the standard medians in comparison with the school and class medians. Mental ages, intelligence quotients, and correlations were calculated.

When this work was completed, the teachers began a careful and critical study of comparison of the results of the tests with their own estimates and marks. The final conclusion reached was that the tests had little if any

value. Since the tests had no value worth serious consideration, no announcement was ever made to the public. It was thought best by the teachers and administrators to remain out of any controversy that might be induced by announcing results that were contrary to those "reported in the literature".

Since that time, however, the writer has made a study and has done no little thinking on the subject of intelligence and intelligence testing; and during that time he has read in classes in education and in the educational magazines, which come to his desk regularly, over two hundred articles and books that deal more or less with this subject. In addition, he has heard and read much of the discussion on and about the "war among the psychologists". He had not considered it necessary to commit himself on this subject until recently when he read a book review in the *Elementary School Journal* for September, 1924, p. 70.

It seems evident from this review that the high priests of education, like the high priests of all time who speak with authority and con-

trol the discussion in their respective fields, are bent on punishing the heretics who dare to disagree with them.

It is in the spirit of science and of free discussion in a field which is of vital importance to all of us that the following random thoughts are submitted for the reader's careful consideration:

For the most part, very little is known about intelligence. The term is as general, vague, and indefinite as the terms democracy, personality, or education itself.

Since intelligence has never been defined, so-called intelligence tests do not and cannot measure intelligence. They measure speed, motor control, ability to read rapidly, and other factors that are not ordinarily considered important factors of intelligence.

The really important factors of intelligence and ability to succeed are not measured in any appreciable degree, if at all. A few of these factors may be enumerated, such as: A sense of responsibility, industry, social adaptation, ability to express one's thoughts in good English, the will to do, and many others. In other words, if intelligence tests tell us anything about a pupil that we did not already know, it is not worth knowing. Anything that is worth knowing about a pupil's mental ability may be found in the school records or by a composite of teachers' estimates.

Mental tests, however, may be used to some advantage in classifying pupils when they enter the kindergarten and primary grades before other means of classification are available.

When the intelligence testing movement began to acquire strength, great surprise was manifest in the educational world over the great variability in teachers' marks, and individual differences in pupils.

Although every observing and thinking pre-adolescent child knows that no two of his acquaintances have the same voice, facial or bodily features, and that no two individuals of any species are exactly alike, which has caused him to wonder at the great variability of forms in nature, the subject of individual differences has been treated as a discovery made possible only by the use of intelligence tests.

Since the most important mental traits are not measured by intelligence tests, a classification and comparison of individuals on the basis of intelligence quotients is impossible. Any teacher can prove this to his own satisfaction by making a careful study of ten pupils who have been classified in the same groups by any one test or combination of tests.

Intelligence testing preceded standardized educational tests and measurements, and is largely responsible for the impetus which was given to the study of the latter. Educational tests and measurements have been immensely valuable in that they do give us some accurate and tangible results, and have caused teachers to become more critical of their own marks and judgments.

Teachers' marks and estimates have been criticised severely as a result of intelligence testing, but the writer fails to find any reference in the "literature" where attention is called to the great variability in scores and ranks given to individual pupils by different intelligence tests.

Much has been written about the correlation of intelligence tests for large groups of pupils, but there is little if any literature on the correlation of teachers' marks for large groups. This would make an interesting investigation for some graduate student in education. So far as our study at Hobart is concerned, the correlations for teachers' marks are higher than for

(Concluded on Page 136)



# The Function of Ozone in Ventilation\*

Frank E. Hartman<sup>1</sup>

## Introduction

Louis Rougier, in the introduction of his recent work, "Philosophy and the New Physics," points out that the majority of philosophical problems are insoluble because the problems do not properly exist. There is also an old mathematical apothegm, familiar to us all, which says that a problem properly stated is better than half solved. This thing of actually identifying our problems, or properly stating them, is a task which we seem to accomplish only with great difficulty. However, science is better equipped today than at any previous time. It has passed through its dogmatic and agnostic periods, and is arrived at a period both experimental and critical. It is only through critical experiments that we can succeed in identifying our problems, and thus, in effect, we must half solve them before we can even state them properly.

Reason, *per se* a valid tool in the hands of the metaphysicians, is quite inadequate in the exact sciences, unless verified by, or backed up with, experimental evidence. A condition of flux is very difficult to visualize. The mind demands symmetry. Absolutely heterogeneous combinations are difficult even of conception, hence, as Rougier remarks, we are driven to "transform simple analogy into absolute identity, or a partial difference into a perfect contrast." It was just such a "necessity of reason" that forced Lavoisier to conclude that carbon dioxide, since it would not support life, must actually be toxic toward it. Thus, by reason alone, if a thing is proven to be non-positive in relation to a set of conditions, then it must at once be actually negative, in relation to this set of conditions. While the logic of such a conclusion may bear inspection; science, today would demand experimental evidence of actual negative properties before admitting them. However, Lavoisier's conclusion became firmly planted, and the belief that the discomfort of badly ventilated places finds its cause in an excess of carbon dioxide, dominates many, even to this day.

## The Carbon Dioxide Theory

More than sixty years ago Pettenkofer laid down the basis on which we, today, assay the quality of our air for ventilation. He demonstrated that neither an excess of  $\text{CO}_2$ , nor a deficiency of oxygen, are contributory to discomfort in badly ventilated places; but he considered  $\text{CO}_2$  as an index of other impurities which he assumed to exist in expired air. Direct methods of analysis are not always convenient, and frequently impractical. For this reason we have long made use of indirect methods. A classical example of this is found in our search for *B. coli* in water, since we may rightfully assume that the presence of *B. coli*, above certain limits, is positively indicative of sewage contamination to an extent that *B. typhosus*, etc., may also be present. Thus the quantitative determination of *B. coli*, which is comparatively simple, affords ample justification for condemning a water supply.

While the  $\text{CO}_2$  content of air may emanate from combustions, or other sources known to produce no deleterious by-products, this factor, used with judgment, does form an excellent index for arriving at a conclusion regarding the probable state of purity of the air under consideration. We must always bear in mind, however, that  $\text{CO}_2$  is an index, and is significant only in relation to other factors which must be known, and considered, before conclusions are justifiable. Excessive concentrations of carbon dioxide, with accompanying oxygen deficiencies,

are rarely met with in ventilation, therefore,  $\text{CO}_2$ , *per se*, may ordinarily be disregarded.

## The Organic Toxin Theory

Pettenkofer's work opened the way for the passage of the carbon dioxide theory; but as he retained it as an index of other impurities, his work naturally implied that other impurities must be present, and this idea was generally held by his contemporaries. Out of the partial decay of the carbon dioxide theory, grew the theory of organic toxins in expired air. Richardson<sup>2</sup>, in 1861 attempted the confirmation of the work of many of his contemporaries, which tended to prove the existence of organic toxins in expired air. About this time there seemed to have been a number of investigators, imbued with the spirit of research; their work was painstaking, but their methods did not differ widely, one from the other. Their experiments consisted mainly of confining mice in bell jars, of a capacity of about one and one-half litres. A number of such jars, each containing a mouse, were placed in series, and air aspirated through them. In this way the mouse in the first jar received fresh air, while those in the remaining jars received air contaminated by the mice preceding them. Of a series of six, the mouse in the sixth jar always died first. The experimenters then placed an absorption bulb, containing sulphuric acid, between the fifth and sixth jar, with the result that the sixth mouse lived while the fifth mouse died.

The conclusions drawn were: (a) That expired air contained organic toxins; (b) that the sulphuric acid absorbed these toxins, thus permitting the sixth mouse to live. Analyses were generally made of the residual air, after death of the mice, and all of the experimenters state that the  $\text{CO}_2$  content was not sufficiently high to account for death by suffocation. None of the experimenters seemed to take any cognizance of temperature or humidity. Richardson's work, however, was primarily directed toward the effects of temperature. He found that a temperature very much higher, or very much lower than  $20^\circ\text{C}$ ., hastened the death of the animals. Richardson also provided for the absorption of the  $\text{CO}_2$  and water vapors, but not the organic matter, and found that his subjects died in less than an hour. He also noted that the effect of elevated and depressed temperatures was more fatal when the air in the jars was richer in oxygen than the ordinary run of air. His paper leads one to believe that after the death of the animal, the atmosphere in the jars was incapable of supporting animal life, and he speaks of it as fatal air. He further states that the passage of an electric spark, from a static machine, through this so-called fatal air, rendered it again capable of supporting life.

## Experiments to Support the Organic Toxin Theory

Hammond<sup>3</sup>, in 1863, confined mice in bell jars and absorbed the  $\text{CO}_2$  with barium hydroxide sponges and the water vapors with calcium chloride. His jars were equipped with a U tube trap, so as to maintain atmospheric pressure, within the jar, without loss of its contents. The rat died in less than an hour. The air left in the jar, after the rat's death, was passed through potassium permanganate solution and showed to contain large quantities of organic matter.

Ransome<sup>4</sup>, in 1872, condensed the vapors from expired air by causing his subject to exhale through a condenser embedded in ice. The water vapor condensed from a normal person's exhalation, during a period of 24 hours, was analyzed by the Wanklyn sanitary water an-

alysis method, and found to contain 0.2 gram of organic matter, as revealed by this test.

The effect of this work was to confirm belief in the existence of a toxic substance in expired air, and perhaps this theory obtained its greatest impetus forward through the work of Brown-Sequard and d'Arsonval.<sup>5</sup> These workers confirmed the ventilating experiments already described by confining rabbits in metal cages connected in series, and obtained substantially the same results as those obtained by former experimenters. However, previous to their ventilating experiment, they conducted experiments in which they injected into the blood vessels of rabbits (a) water which had been washed from the air passages of a dog, (b) water condensed from the expired breath of a man, and (c) water condensed from the expired breath of a tracheotomized dog. The rabbits thus treated invariably died, manifesting symptoms which pointed to death by poison.

## Haldane's Work

Haldane<sup>6</sup> was attracted by this work, but in attempting to duplicate it he found that his subjects lived for a sufficient period of time to indicate that the air in the jars was quite capable of supporting life. Haldane, in his experiments, instead of using sulphuric acid for "absorbing the organic matter," caused the air to pass over copper heated to redness, so as to destroy the organic matter by combustion. The air was then passed through a condenser, to condense out the vapors, and after again attaining normal temperature was passed into the sixth jar. He found, however, that if the experiment was continued long enough the animals died.

Further work of Haldane and Smith<sup>7</sup> tends to refute the theory of an organic toxin in expired air, and to establish the theory that the physical properties of air, rather than its chemical properties, are of vital importance in ventilation. They confined a person, for twelve hours, in an air-tight cabinet, having a volume no greater than 70 cubic feet. Soda-lime was placed in the cabinet to absorb the  $\text{CO}_2$ , and during the occupancy of the cabinet the oxygen content decreased from 20.9 per cent to no more than 13 per cent. The subject did not complain of a headache at any time, nor was there manifest any condition of intoxication.

The results of Haldane's work threw the organic toxin theory into disrepute, at least in scientific circles; but perhaps the outstanding refutation of this theory is found in the work of Billings, Mitchell, and Bergey<sup>8</sup>. These investigators demonstrated that a given amount of distilled water, injected into the blood vessels of rabbits, would produce death with the same symptoms as those manifested by the rabbits in the Brown-Sequard, d'Arsonval experiments; and that a quantity of liquid condensed from expired air, slightly less in volume than the lethal dose of distilled water, could be injected into rabbits without causing distress. These investigators also attempted a duplication of the chain-ventilating experiments conducted by Brown-Sequard, etc.; but failed to confirm former conclusions. In fact, in the tenth conclusion of their paper, they state that the discomforts arising from inadequate ventilation could be laid to an increase in temperature, odors, and humidity.

After the work of these investigators, scientific circles no longer gave credence to the presence of a deadly substance in expired air. We cannot long have a condition unless we have some theories about it, and with the passage of one theory a second immediately crops up to take its place.

\*Paper presented before Philadelphia Chapter of the American Society of Heating and Ventilating Engineers, February 12th, 1925.



### Air-Borne Infection Theory

With the general acceptance of the germ theory of disease, attention was immediately directed toward the sources of infection by disease germs, and expired, or so-called foul air, was at once suspected. It would be both tedious and needless to follow this theory throughout its many vicissitudes. Suffice it to say that as far back as 1905 Fluegge<sup>9</sup>, by a series of conclusive experiments, demonstrated that pathogenic bacteria were not a factor in general ventilation. Winslow<sup>10</sup>, Chapin<sup>11</sup>, and a host of modern authorities have demonstrated the remote possibility of air-borne infection; hence, the ventilating engineer may safely neglect this factor in his consideration of general ventilation.

### Physical Properties of Air

Amid the din of discussion, which centered around the toxic properties of "vitiating air," there occasionally arose a voice which would have pointed toward the physical properties of air, as having a direct bearing on health and comfort; but for many years these voices either passed unheard, or were drowned out. Hermans, in 1883, attempted to call attention to the evils of rising temperature in badly ventilated places. One of the conclusions drawn by Billings, Mitchell, and Bergey was that the major portion of the discomfort experienced in badly ventilated places, emanated from high temperatures and foul odors. Fluegge, in 1905, made it quite emphatic that high temperature, and not chemical composition of the air, caused the distress in badly ventilated places. Benedict and Milner<sup>12</sup>, in 1907, confirmed the statements of Fluegge, and added the factor humidity to the consideration of ventilation. Dr. Leonard Hill ascribed the discomfort of bad ventilation to heat stagnation of the body, and, therefore, since temperature and humidity have the greatest bearing on heat elimination from the body, he held these factors as being preeminently important in the ventilation of crowded places.

In Great Britain, in 1909, the first Report of the Departmental Committee on Humidity and Ventilation in Cotton Weaving Sheds, favored the use of the wet bulb temperature as an index of the air condition in ventilation, over the dry bulb temperature, as it touched on the factor, humidity. This was a decided advance, but at present we know a great deal more about the effects of the physical condition of air in ventilation than was known then, and the work of the ventilating engineers' society, particularly that started by Houghten and Yagloglou,<sup>13</sup> has given us a wealth of information from which to draw. Undoubtedly, the effective temperature, as determined by this work, affords the best indication of adequate ventilation, from the standpoint of the physical condition of the air. There can be no doubt that the most patent causes of discomfort in crowded and badly ventilated places are high temperatures, high humidity, and bad odors. These are tangible facts, and ones which no engineer can afford to ignore; but the question arises in my mind if he is justified in stopping here.

We have reviewed an array of evidence, pro and con, concerning the chemical properties of air and their effect in ventilation. This evidence has certainly been *per contra*, and of a nature which would tend to make compromise difficult; but compromise should never be difficult, for in the majority of cases the truth generally lays half way between the poles of our observations. And I shall endeavor to point out that such is quite probably the case here.

### Ozone in Ventilation

In relation to the art of ventilation ozone enjoys a certain antiquity. In fact, the early savants found it a fascinating subject, and a bibliography of its early literature, especially as regards the naturally occurring ozone and its relation to health, would fill quite a deal more space than I have allotted to this paper.

Glaisher<sup>14</sup>, Robert<sup>15</sup>, Billiard<sup>16</sup>, Moffat<sup>17</sup>, and a host of others, from 1854 to 1865, conducted exhaustive researches on the relation between the quantity of ozone in the atmosphere and the occurrences of epidemics of cholera. Wolf<sup>18</sup>, in 1855, found a relation between the range of variations of the quantity of ozone in the atmosphere, and the hygienic state of the places of his observations. Billiard<sup>19</sup>, in 1858, found a relation between the quantity of atmospheric ozone and the hygienic state of the surroundings.

Pfaff<sup>20</sup>, in 1862, found that the periods of time in which the atmospheric ozone ran high, coincided with periods of time in which the number of respiratory diseases reported ran very low. Saintpierre<sup>22</sup>, in 1864, attempted to prove that ozone was produced by the mechanical action of ventilating apparatus. His paper is very interesting, for it records an observation of an ionizing phenomenon, when little if anything was known of ionized gases. Undoubtedly it was a chemical activity of the air, due to ionization, which was observed by him, and not an actual formation of ozone. Carvalho<sup>23</sup>, in 1875, described an ozonizer suitable to render unhealthy places healthy. This early literature of ozone is full of remarkable observations, and it is surprising to see how things are apprehended long before they are comprehended. However, these savants worked and wrote in an age that was not quite so congested as our own, and their observations of naturally occurring ozone can have little value for an age that so heavily contaminates its air with automobiles, congestion of population, and industry, that such ozone, as may occur in nature, would be used up before it descended to a level where it could be utilized by man.

### Some Recent Contradictions

The ozone literature of a more recent vintage closely parallels that of ventilation in general. It is full of evidence of a very polar nature, pro and con; and this condition has been induced, largely no doubt, by attempts to exploit ozone apparatus, for ventilation, long before the facts of ozone production were well understood. This, however, is nothing peculiar to ozone; it is the common fate of many of our new ideas. On the one hand we find such authorities as the New York State Ventilation Commission<sup>24</sup> going on record that ozone will not destroy organic odors, but when mixed with air containing organic odors a sweet, sickish odor results. On this side we also find Steinmetz<sup>25</sup>, Konrich<sup>26</sup>, Erlandsen and Schwarz<sup>27</sup>, and Jordan, Carlson, and Sawyer<sup>21</sup>. On the other hand, evidence is presented which demonstrates that ozone does effectively destroy organic odors by Olsen and Ulrick<sup>28</sup>, their paper being a direct answer to the work of Jordan, Carlson, and Sawyer. Feldner<sup>29</sup>, Bass<sup>30</sup>, Franklin<sup>31</sup>, Czaplewski<sup>32</sup>, Wooldridge<sup>33</sup>, and Von Kupffer<sup>34</sup> also present valid evidence of the ability of ozone to destroy odors in ventilation, and the work of these investigators reveals ozone possessed of great value as an adjunct to general ventilation.

But so much for the literature of ozone. It contains statements which accredit ozone with great germicidal powers, and recommends its use in ventilations for this purpose. It is also replete with refutations of just such claims, written in a tenor which would tend to throw the whole subject into disrepute. Now, we know that ozone is not a germicide, as used in general ventilation, nor would we be at pains to establish it as such, even were it possible, for there is no need for a germicide in general ventilation. The inhibiting action of ozone on fungi is another question, and finds a vastly different application. In other reports of investigators of ozone in ventilation we find such statements as, "Temperature and humidity (of the air passed through the ozonizer) has very

little effect on the ozone production; the air velocity through the tube has a direct bearing."<sup>35</sup> Now we also know that if this investigator had persevered long enough, and made a really quantitative study of his work he would have arrived at opposite conclusions regarding the first part of the statement, and a much modified view of the latter. I shall not go into the details of ozone production here, but in passing I want to stress the point that many ozone investigations have been valueless, because of the defects of the apparatus worked with. Ozonizers utilizing air directly from the atmosphere, can no more yield continuous, quantitative results than can a motor depending for its energy upon the sun or waves.

### Functions of Ozone

But let us return to the functions of ozone, as that is the burden of this paper, and see just what it can accomplish that is of value in ventilation. Ozone is, beyond doubt, an excellent deodorant. It readily attacks such products of putrefaction as trimethylamine, indole, skatole, etc., oxidizing them to odorless and innocuous products. Ozone further oxidizes hydrogen sulphide to free sulphur and water; this is an excellent quantitative reaction. And carbon monoxide is carried over to the dioxide by ozone. The odors of tobacco smoke are readily eliminated by ozone, and the continuous addition of ozonized air to an atmosphere containing tobacco smoke, will cause a fairly rapid settling out of the smoke particles. Practically all of the odors of cooking, odoriferous gases given off by foods, and many of the industrial odors are destroyed, and not masked by ozone. For use in general ventilation, ozone is the deodorant *par excellence*.

Of the oxygen passed through an ozonizer, only a very small fraction is converted into ozone, but a large portion is ionized, or chemically excited. In organic reactions, particularly, ozone is markedly catalytic in its action; that is to say, it promotes chemical action, or oxidation, in excess of the amount that can be quantitatively accounted for by the ozone present. The literature of ozone, particularly that which pertains to its chemical uses, is replete with instances of this so-called catalytic action of ozone; hence, we are justified in saying that ozonized air is more active, chemically, than air that is not ozonized. But more of this later. There is a considerable literature on ozone, dealing with what may rightly be called its therapeutic uses. This literature tends to indicate that ozone has value in increasing the resistance of the body, especially against respiratory diseases, and that it has a specific value in cases of anemia. I do not believe, however, that therapeutics is within the scope of ventilation, and these references to it, in connection with ozone, are made only in passing.

### A Review of the Evidence

Now let us go back and review some of the evidence which has been presented. Firstly, I believe we can exclude carbon dioxide and bacteria from our considerations, and take up at once the theory of organic toxins. I feel sure that the evidence presented here proves, fairly conclusively, that there is no acute poison in expired air; therefore, we need not concern ourselves with the possibility of a rapid extermination of the species, through inadequate ventilation. On the other hand, we know only too well that all manner of organic gases are thrown into the air by the people who inhabit it. These gases contain products of combustion and putrefaction, they are odoriferous, noxious, and to some people actually nauseous. With the number of people, which we today crowd into the limited spaces of our institutions and places of business, the concentration of these gases must attain to the objectionable limit. Of their exact toxicity we are only prepared to say that it is

not acute, but are we justified in saying that it is not insidious?

At an impasse of this sort we may well recall the words of Rougier, and be careful that we do not change a partial difference into an absolute contrast. There is no doubt in my mind that we all suffer in comfort, energy output and mental power, when surrounded by an atmosphere rich in body effluvia, and in the report of the New York State Ventilating Commission these effects were noticed. I believe that it is one of the functions of ventilation to prevent the attaining of such a condition, and that every tool of the art should be brought to bear upon it. Haldane's "cabinet experiment" was very illuminating; it removed from the art a potent fear, and pointed a way to a vast improvement. But we must agree that in his choice of subjects he was particularly blessed in obtaining a person who could occupy a 70 cubic feet, airtight cabinet, for twelve hours and escape feelings of dire distress.

The theory of organic toxins in expired air, which we are now about to lay on the scrap heap, has shaped our ventilating practices for many years. It was on the basis of this theory that the 30 cubic feet per minute requirement per person of fresh air was founded. The theory employed CO<sub>2</sub> as an index, and hoped that, by continuously shoving fresh air into our buildings, the "vitiating air" exhaled by the occupants would be shoved out before its toxic substances could take effect, and a low CO<sub>2</sub> index would reveal when this was accomplished. The supporters of this theory were indeed enthusiastic and their enthusiasm caused this requirement to be written into the laws or statutes of 21 of our states. When this theory began to fall into disrepute, a general reaction against the ventilating practices of the day set in, and shortly the literature abounded with reports and theses which recommended that we actually return to window ventilation; but I shall come to this again later.

#### Health and Comfort vs. Economic Factors

We are only just beginning to realize the potent influence of the physical properties of air on health and comfort, and the work of the Research Laboratory of the American Society of Heating and Ventilating Engineers is daily ascribing to them an enhanced importance. Temperature and humidity control are of prime importance. We are now beginning to realize that the excessively low humidity, produced by raising winter air to a comfortable temperature for ventilating and heating, produces a dehydration of the mucous membranes, which lowers their resistance against disease; and that humidity control in the winter is just as important as dehumidification in the summer, to facilitate heat elimination from the body. To attempt to accomplish the ventilation of our schools, institutions, and commercial buildings with the open window method, is to set at defiance all that we have but recently learned to be essential to both health and comfort.

Apart from these factors, there is yet another one to consider, and that is the economic feature of ventilation. Industrial conditions today are such as to demand some method of cleaning our air, either by washing or filtration. Health and comfort considerations demand an adequate temperature and humidity control, for the functions of a ventilating plant are manifold. At times it is called upon to carry off heat, or exert a cooling effect; again it must supply moisture, and yet again offer dehumidification; and all of this demands a mechanical system of the highest order. But let us return to the economic feature. In what way, and to what extent, can we apply the facts, that have now come into our possession, for the production of a better and more economical method of ventilation? Or in a word, to save fuel, reduce operating cost and at the same time pro-

duce as nearly an ideal air condition as is physically possible.

#### Maintaining the Chemical Activity of Air

In arriving at a conclusion of this nature I think that a consideration of the prime function of air in the animal economy of man should be the starting point. Air is serviceable to man for the oxygen it contains. This oxygen

is utilized in eliminating destroyed tissue from the body through the process of combustion, which is a chemical reaction. The oxygen of the air is also called upon to assimilate the products of putrefaction and decay, which is accomplished by oxidizing them, either back to their original elements, or rendering them otherwise useful, or innocuous to man. These

(Continued on Page 139)

## The High School Day

James H. Harris, Superintendent of Schools, Pontiac, Mich.

Interest in the length of the high school day, the number of class periods into which it is divided, and the number of minutes per period, led me to address the following questionnaire to a number of superintendents and principals throughout the country.

We are interested in the length of the high school day, the number of periods per day, and the number of minutes per period. Would you, therefore, kindly furnish the information called for below?

1. Our high school day begins at.....a. m., and continues until.....p. m. It consists of.....hours, and is divided into.....periods of.....minutes each.

2. We { do not close } for the noon or lunch hour. We allow.....minutes for the lunch hour.

3. Is there any disposition to make any change in the above schedule?

Name of City.....Date.....

This was sent, not to the large cities of the country, but to those of medium and lower medium size.

Many, of course, did not reply, but the 38 that did are widely enough scattered to form a fairly representative and trustworthy cross-section of current practice.

Here are our returns:

| Name of City          | Time of Opening School in Morning | Time of Closing in Afternoon | No. Class Periods | No. Min. per Period | Dismiss for Lunch | Time Allotted for Lunch |
|-----------------------|-----------------------------------|------------------------------|-------------------|---------------------|-------------------|-------------------------|
| Ann Arbor, Mich.      | 8:00                              | 3:00                         | 6                 | 60                  | Yes               | 60 Min.                 |
| Battle Creek, Mich.   | 8:20                              | 4:10                         | 8                 | 45                  | Yes               | 78 Min.                 |
| Bay City, Mich.       | 8:30                              | 4:00                         | 10                | 45                  | No                | 45 Min.                 |
| Highland Park, Mich.  | 8:30                              | 3:30                         | 9                 | 45                  | No                | 45 Min.                 |
| Jackson, Mich.        | 8:30                              | 3:35                         | 7                 | 47                  | Yes               | 85 Min.                 |
| Kalamazoo, Mich.      | 8:00                              | 4:00                         | 8                 | 60                  | No                | 30 Min.                 |
| Mt. Clemens, Mich.    | 8:00                              | 4:30                         | 7                 | 60                  | Yes               | 60 Min.                 |
| Muskegon, Mich.       | 8:20                              | 3:30                         | 9                 | 43                  | No                | 35 Min.                 |
| Pontiac, Mich.        | 9:00                              | 3:00                         | 8                 | 45                  | No                | 2 45 Min.               |
| Saginaw, W. S., Mich. | 8:15                              | 3:30                         | 5                 | 60                  | Yes               | 75 Min.                 |
| Grand Rapids, Mich.   | 8:25                              | 2:50                         | 6                 | 57                  | Yes               | 44 Min.                 |
| Flint, Mich.          | 8:40                              | 3:35                         | 6                 | 60                  | No                |                         |
| Fort Wayne, Ind.      | 8:25                              | 3:05                         | 8                 | 45                  | No                | 3 45 Min.               |
| Gary, Ind.            | 8:15                              | 4:15                         | 8                 | 60                  | No                | 60 Min.                 |
| Hammond, Ind.         | 8:30                              | 3:15                         | 8                 | 50                  | No                | 45 Min.                 |
| South Bend, Ind.      | 8:20                              | 3:15                         | 6                 | 55-60               | Yes               | 60 Min.                 |
| Terre Haute, Ind.     | 8:20                              | 3:30                         | 8                 | 40                  | Yes               | 70 Min.                 |
| Joliet, Ill.          | 8:28                              | 3:42                         | 8                 | 50                  | No                |                         |
| Moline, Ill.          | 9:00                              | 3:00                         | 9                 | 45                  | No                | 20 to 30 Min.           |
| Peoria, Ill.          | 8:30                              | 2:45                         | 7                 | 45                  | No                | 2 20 Min.               |
| Rock Island, Ill.     | 8:50                              | 3:10                         | 5                 | 70                  | No                | 3 35 Min.               |
| Fond du Lac, Wis.     | 8:00                              | 12:30                        | 6                 | 45                  | No                |                         |
| Green Bay, Wis.       | 8:15                              | 3:15                         | 5                 | 60                  | Yes               | 75 Min.                 |
| Madison, Wis.         | 8:30                              | 3:50                         | 8                 | 40                  | Yes               | 70 Min.                 |
| Racine, Wis.          | 8:15                              | 3:30                         | 5                 | 65                  | Yes               | 90 Min.                 |
| *Schenectady, N. Y.   | 8:15                              | 12:30                        | Two sessions      |                     |                   |                         |
|                       | 12:45                             | 5:15                         |                   |                     |                   |                         |
| East Orange, N. J.    | 8:30                              | 2:30                         | 7                 | 40                  | No                | 2 30 Min.               |
| New Castle, Pa.       | 8:45                              | 3:30                         | 9                 | 40                  | No                | 2 40 Min.               |
| Dubuque, Ia.          | 9:00                              | 3:50                         | 5                 | 71                  | No                | 2 35 Min.               |
| Hamilton, Ohio        | 8:30                              | 2:15                         | 8                 | 45                  | No                |                         |
| Wheeling, W. Va.      | 8:45                              | 3:00                         | 7                 | 45                  | No                | 3 45 Min.               |
| Pueblo, Colo.         | 8:25                              | 3:00                         | 6                 | 60                  | No                | 30 Min.                 |
| San Diego, Calif.     | 8:00                              | 3:20                         | 9                 | 40                  | No                | 2 45 Min.               |
| Wichita, Kans.        | 8:20                              | 3:30                         | 6                 | 60                  | Yes               | 35 Min.                 |
| Topeka, Kans.         | 8:30                              | 2:45                         | 5+                | 60-65               | No                | 2 40 Min.               |
| San Antonio, Texas    |                                   | 3:20                         | 6                 | 60                  | No                |                         |
| New Britain, Conn.    | 8:15                              | 4:15                         | 5                 | 4 72                | Yes               | 1 hr. 25 Min.           |
|                       |                                   |                              |                   | 1 35                |                   |                         |
| *Cedar Rapids, Ia.    | 8:15                              | 3:45                         | 10                | 40                  | No                |                         |
| Springfield, Ill.     | 8:45                              | 3:15                         |                   | 40-60               | No                | 60 Min.                 |
|                       |                                   |                              |                   | ( Min. each         |                   | Two shifts              |

\*Crowded conditions.

I was and am particularly interested in the length of the high school period, and it was primarily the "urge" to learn what the practice is in this particular that led to the inquiry. For the length of the class period is more than the surface difference between 45 and 60 minutes; it is a difference of educational theory and attitude.

The 60 (or 70) minute group is committed, it may be safely inferred, to the idea of supervised study. The 45 (or 40) minute group is either opposed to the supervised study plan, or is so indifferent to it as not to be shifted from the path of tradition. Unable, that is to say, to weigh decisively the arguments *pro* and *con* as to the supervised study plan, the latter group takes the line of least resistance and follows the easier and safer course of custom and tradition. Not unwisely, perhaps!

safely assert that the supervised study group is right just because it is in the minority. Minorities aren't always right even though history shows a surprising number of cases where they were. Supervised study may be an exception!

The fact of the matter is that supervised study is still in the realm of opinion, and the opportunity is knocking at the door of some bureau of educational research to isolate the problem, formulate the method of study and investigation, and endeavor to ascertain and weigh actual facts and results. Only thus can the question be lifted out of the bog of opinion and placed on the firm ground of fact.

Such a study will require careful planning, and cover, if results are measured, a considerable period of time, but it will be well worth while, and constitute a real contribution to educational practice.



# The County Unit and the Consolidated School

E. S. Richardson, Superintendent, Webster Parish, Minden, La.

The country's ever increasing universal demand for better treatment, educationally, of her rural children renders the subject of this paper a vital one until every child in this great nation shall be given equal educational opportunities.

There was practically no demand 25 years ago by any county of any state for the organization of a consolidated school, nor was there any county in any state ready for a modern twentieth century county unit system of school administration.

At that time there were many physical reasons for the operation of small schools and for the establishment of small local administrative governmental units. The rural counties at that time had few improved highways, few railways, no automobiles, no telephones, and no rural mail service, the lack of which made it physically difficult to operate successfully county systems of schools.

I am of the opinion that our old school machinery installed years ago and still in vogue in a number of states has not kept pace with other lines of human endeavor. This old machinery has served well its purpose in the days gone by; but we find it entirely inadequate to meet present-day problems.

The time has arrived in the history of educational development when we shall be forced to install either new machinery or entirely rebuild the old. To some, this step would seem radical, but I believe it to be absolutely necessary in order to take care of the multiplied needs of our present-day complex civilization. It is the responsibility of leaders in educational thought to set aside petty prejudices and jealousies and assist in organizing every county in every state of the nation, a system of school administration that will measure up in the matter of efficiency and be commensurate in every way with modern commercial organizations of the present day.

During the past 25 years, there have been builded by organization, consolidation, and adequate supervision, America's greatest commercial enterprises. Small manufacturing plants located in different parts of the country have been consolidated, and placed under control of small boards. The boards in turn employ a manager who is held responsible for its success. He is permitted to appoint as many as he finds necessary for the successful operation of all departments. This new and large manufacturing concern is expected to turn out standardized products at less money to the consumer and at the same time earn a reasonable dividend for the owners.

Small railroad companies owning short lines have consolidated them under one great system. When this is done the stockholders elect a small board authorized to employ a competent general superintendent who is empowered to appoint as many assistants and supervisors as he deems necessary to successfully operate all departments. This method has enabled our railroads to give the public better service at the same cost.

Many small merchantile establishments located and operated by different heads over the country have been consolidated into large chain and department store located in towns and cities all over the country. Such stores today are selling to the public better goods at less money and at the same time make a profit for their stockholders.

The county, state and nation in many parts of our country have taken over highway systems

and placed them in the hands of trained engineers, and by so doing are putting modern surfaced highways over wide rivers through vast worthless wastes and making it possible for the public to travel for thousands of miles with ease on model roads through the poorest section of the nation.

In fact, during these 25 years, consolidation, centralization and expert supervision have been the watchwords in all great business organizations.

Why should not these modern business methods be applied to the ever growing public school systems that touch so vitally, every tax payer and every boy and girl in the whole country? Can we expect to get the very best results educationally for the people's money, when we continue to operate this tremendous big business of schools of the present day on the same antiquated system of 25 years ago? Can we expect to consolidate, organize and supervise our schools properly, holding to a unit of administration so small an area as a township or district? Certainly we cannot expect to have many laymen living in every small rural township or district capable of judging the ability of the teacher or passing on the efficiency of the school.

I know of no state in the union that has a stronger, more centralized school system than has my own native state, Louisiana.

## Summary of Parish Organization

The following is a brief resume of our parish or county organization:

At the head of the parish (county) school system is a parish board of education which included all schools of the parish including cities and towns. The parish board of education is composed of representative citizens of the parish. No citizen subject to the board's authority or financially interested in its transactions is eligible for membership. Louisiana boards are small enough to work easily and effectively yet large enough to be representative; few boards have ever twelve members. To guarantee stability and to secure continuity of policies, the term of office is six years—and the expiration of the term of office of the additional members is so arranged that not more than one-third of the members go off or come on the board at any one time. Members are eligible for reelection and removable only for cause. They are elected directly by the people and represent all parts of the parish. They are allowed no salary except \$5 per meeting and mileage. They meet as often as necessary at the parish seat.

This board is responsible to the people of the parish for the satisfactory conduct of the schools. To meet these responsibilities the school board of education is governed by the laws of the state, possesses full power over the financial business, and educational administration and management of all the schools which exercise through its executive officer, the parish superintendent. This is fundamental; no board can be held responsible unless its powers are commensurate with its responsibilities. The most important powers vested in the Louisiana parish boards of education are as follows:

1. To appoint an executive officer, county superintendent through whom the board exercises the powers vested in it, and to provide the county superintendent with an adequate number of assistants. The superintendent acts as the board's secretary and treasurer.

2. To plan a complete system of schools for the parish, and in accord with this plan, to determine the kinds of grades of schools to be

established and maintained, locate them, divide the school into the attendance districts, and provide for the transportation of school children. Consolidate schools, etc.

3. To provide and maintain grounds, buildings and physical equipment for all schools of the parish.

4. To see that the state course of study is carried out according to law.

5. To provide instructional equipment and supplies.

6. To employ all principals, supervisors, and teachers on the recommendation of the superintendent.

7. To employ bus drivers and fix all salaries, assign them to their positions of work, to dismiss them for cause.

8. To prepare a budget of expenditures.

9. To order school tax elections and school bond elections and promulgate same.

10. To maintain a central warehouse for all school supplies for the parish.

11. To enumerate the educables of the parish.

## Board and Superintendent

While the powers vested in the parish board of education include full and final authority over financial, business, or educational administration of the schools, board members do not attempt to run the schools. They do not attempt to plan a system of schools for the parish, decide on the kind of grades to be established or do no work that is technical in its nature. This is left up to recommendations and decisions of the parish superintendent.

The power vested in the parish board of education is exercised by the board's executive officer, county superintendent. He takes the initiative and advises the board on all matters, and the board acts only through him, reserving, of course, the right to approve or disapprove his recommendations by modifications or amend them, and to pass judgment on his work. This conception of the most efficient method of managing schools—that is, that the board should act only through its executive officers,—does not subordinate the board to him nor does it relieve the board of its responsibilities; but this conception of the place of the county superintendent in a well organized county system does give new importance to the office, because it recognizes the fundamental need of trained and continuous professional leadership.

With the business and professional responsibility of administering to all the schools of an entire county, the board's executive-superintendent should possess superior traits of leadership. He should be a man of known integrity and possess ripe experience and ample scholarship, and who has the ability to organize and sell the schools to the people of the county. He should receive a salary commensurate with men who are doing a like service in the large organized business enterprises.

The centralized county unit plan in Louisiana has been in operation a number of years. That the public has approved of this plan is evidence by the number of one-room schools that have been eliminated during the past few years. According to the report of the state superintendent of public instruction there are only left about 600 one-room schools in the state; 1300 auto transfer trucks have been put on to take care of 40,000 country children. The cost per child for transportation is \$26.55 per session.

There is not and should not be any thought of returning to the old system of small local units of local management of country schools. The policy of consolidation will be continued and





A REMARKABLE SCHOOL PLANT AT MINDEN, LOUISIANA.

To the left, the Minden high school, to the right, the Minden grammar school. The high school site covers twenty-two acres. Cost of plant \$397,000. Student attendance of 283 in high school, 812 in grades, serving a territory of 148 square miles. The principal's home, janitor's home, and club house are located on premises.

will keep pace with the good roads program. In no other way can rural children be provided with the same high type of instruction that is enjoyed by children living in larger centers of population.

County pooling and county budgeting and distribution go with the county unit administration program. This method of distribution of school moneys enables all children of the county

to have the same educational opportunity. In my home parish, this plan has enabled the parish school board to build uniform buildings and equip them with standardized equipment; transferring all children living more than two miles to these consolidated high schools.

The process of developing public sentiment is slow, but let us not be discouraged. May the time soon come when the wealthier centers shall

realize more keenly their responsibility to all the children. When this spirit of the fatherhood of God and the brotherhood of man shall have permeated the hearts of all of our people of this great democracy, the children who live in the poorer communities will not be penalized, but will receive their full share of educational opportunity.

## How Long Should We Serve on a School Board?

By a Former School Board President

I have a preacher friend who has always maintained that it was better to leave a charge while his congregation still wanted him to stay longer than it was to stay so long that they would wish he had left years before. I believe that his opinion on that subject is one that may well be followed by other public servants and public officials, including teachers and also school board members. The question of how long we should serve on a school board is a question which every board member must answer sooner or later, unless the public answers it for him by retiring him to private life in favor of some other candidate.

Personally, I don't believe a school board member should serve too long. A change in the personnel of a school board, the injection of new blood and new ideas, is good for a school. A year ago after serving four terms of one year each as president of our school board, I voluntarily retired from school affairs. I could have been reelected without opposition, but the voters of my village had honored me with another office and feeling that one public office is enough for one man, I retired from the presidency of the school board. The voters chose one of the board members for president and elected a man to fill the term of the member elected president. I left office feeling that our board had accomplished certain things and made several steps forward during my administration.

During the last year they have accomplished other things and made other steps forward. The change of personnel made when I left, has undoubtedly helped the school just the same as the change of personnel and ideas helped the school when another member and myself were first elected to the board. When we were first elected, it was the habit of the board to hire the school superintendent and also all of the teachers, the superintendent having no voice in the selection of his staff. The result was that in many instances a teaching force was selected that clashed more or less and did not run smoothly. As a result, the school suffered.

The average board of education, composed of people from all walks of life, most of whom are far removed from education, is to my mind not competent to choose a teaching force for a modern school. It takes an experienced educator to choose a competent staff of teachers that will work together, work with the superin-

tendent and with the school to the best interests of the school and the community. The average board of education member does not qualify as an educator. An up-to-date school superintendent does. When my fellow member and myself were elected, we brought the rest of the board over to our way of thinking on that question. As a result, the superintendent was allowed to select and recommend his teaching force, and his recommendations were always accepted by the board. The result was harmony in the school, a better spirit among the children in the community, and an advanced standing for the school. That was one favorable result directly traceable to the change of personnel and ideas.

The man who was made a member of the board last year following my retirement was an ardent believer in libraries. He is president of our library board, and a keen reader and student. When he became a school board member, he immediately took a particular interest in the school library. The result of that interest is that he got the rest of the board interested in the library, and they took necessary action which enlarged and organized our school library to a point where it is one of the best school libraries for a school of our size in the state. Once more new blood and new ideas had proven a benefit to the school. If our board had gone along without a change in membership, our library which we considered good enough, would not have been much improved.

No matter how hard we board members try to represent the entire community, the fact remains that when we are elected to office we carry to that office our own pet hobbies, our likes, and our dislikes, and it is those hobbies and personal likes and dislikes which very largely govern our actions as public officials. And it is those personal opinions and ideas which we express that inject new blood and new life into a school board. Not too frequent changes on a board of education I believe are beneficial to a school.

The same persons serving on a board year in and year out, no matter how good board members they may be, do not give to the board the new viewpoints and the new ideas which are necessary to keep up interest and assure the highest degree of success. The same members year after year get so used to each other and each other's ideas that the routine of the board

becomes a sort of set procedure, the board gets in a rut, the teachers get in a rut, and the school gets in a rut.

The election of new members to a school board always has a marked effect upon the teaching force. After new members are elected and especially if they pay the school an occasional visit, you will see a marked increase in interest and "pep" on the part of the teachers. New members mean uncertainty in the minds of the teachers. Where one board has been going along year after year with the same membership, the teachers become used to the board, know just about what to expect from them and as a consequence only too often act accordingly. New members mean that the old days are over, new personalities are to be dealt with, and as a result there is a general tightening up of the slack ends and an increased drive to the school work—a better morale. This goes not only for the teachers; superintendents also get in a groove when they become too well acquainted with the actions and ideas of a board that never changes.

I know a business man who points with pride to his twenty years' service as a member of a board of education, at the end of which service he retired and passed the position along to his son, with, of course, the approval of the voters. That man served twenty years as a member of a school board, yet in a talk with him on school affairs one day I made the startling discovery that he didn't know how school taxes were obtained or how the tax rate was determined. He had a vague idea about having voted each year for the amount of money they thought they would need to run the school and that was as far as his knowledge of school finances went. That twenty years' service to the school was not productive of any great benefit to the school or the community.

Another former school official takes pride in nineteen years of service, yet at the end of those nineteen years when he became a candidate for a term as president of the board to round out his long school service, the public didn't think enough of those nineteen years of service to turn out in sufficient numbers to elect him. Only about ten voters came out to vote for him, and a few minutes before the polls closed eighteen friends of another man came to the polls, wrote their man's name on the ticket and retired to private life the man who had been



nineteen years a member of the board of education. As my preacher friend says, "It's better to go while they want you to stay than it is to stay until they wish you'd left years before."

The great trouble in making frequent changes on a school board or any other board, that is, voluntary changes, is that so many people once they are elected to office seem to think that they should hold that office the rest of their natural lives; that they have some sort of permanent personal claim on the job to which they have been elected. Many office holders are not satisfied to hold office for a reasonable time and then voluntarily retire, they hang on and hang on until some discontent springs up, a new man defeats them and the many years of real valuable service are forgotten in the flush of the last school fight which throws them out of office.

One thing we should all remember is that our service to our school does not necessarily have to end when we retire voluntarily or otherwise, from the board of education. In fact, to my mind, we can serve our school and our community very often to better advantage after we leave the board than we could while we were still a member of it. The more people familiar with school work, school needs, and school aims that we can have in our general population, the easier will it be to secure proper support for educational needs. Strange as it may seem, I have found from personal experience that many people will pay much more attention to my opinions on school matters now that I am no longer on the school board than they would pay to those same opinions, expressed while I was president of the board of education.

When I was president of the board certain portions of the public thought that when I expressed certain views it was merely an attempt to "put something over for the school." Now that I am no longer on the board, that I am an ordinary taxpayer like the rest of them, they give a great deal of weight to my opinions on school subjects and school needs because, as one man expressed it, "He must know what's what; He used to be president of the board." Yet when I was president that same gentleman wouldn't have listened to a word I said. Such is human nature. From numerous experiences such as that I have come to the conclusion that my service to the school is not ended, even though my term of office on that school board is.

Recently our school board took certain action relative to the purchase of some property. Many taxpayers questioned their right to act as they did. Some of the protestors came to me to know what I thought. I was able to explain by just what authority, authority given them by a vote of the people, by the way, the board had acted. My explanation cleared the air and saved the board considerable unpleasantness. We can be of service in the ranks of the people just as well as in the ranks of school board members.

School taxation is a Chinese puzzle to the average taxpayer who is unfamiliar with school affairs and school legislation. The more former school board members there are in a community who can explain to their neighbors and friends the how and the why of school taxes the less complaint there will be at tax time about school taxes. A few former school board members quietly helping preach the doctrine of better schools can do a great deal in a community to bring about a more friendly attitude toward the public school among the people who help pay school taxes but who can see no direct tangible benefit from the school.

And if these former school board members are members who voluntarily retired from the board, so much the better because then they are really respected for their opinions, while the

fellow who was thrown off the board at an election is very likely to harbor a grudge and his grudge is generally against the school because he no longer has a hand in its management.

A former member defeated at an election is very likely to be a mere "knocker" when any needed school improvement is necessary, simply because he himself is no longer on the board. I had a former board member who had served long and well on the school board but who had lost his office through a general political upheaval, tell me that a certain bit of school improvement we were trying to get through had been needed for years, was needed back when he was on the board. Yet he wouldn't say a word publicly in favor of the improvement because he still nursed his ill will for having been removed from the board. He helped deprive his own children of better school advantages because of the hurt of his defeat years before.

The question may be raised: How long should we serve on the school board? I suppose to that question there would be about as many answers as there are school board members. Some would say as long as the people want us or will let us stay; others will have varying ideas. Personally, I believe that where the term of a board member is three years, two terms should be enough for one member. That gives him an opportunity to be reelected for another term if he proves capable and efficient during his first term. If the term is two years, give a member three terms, two reelections, if he makes good the first term.

Where the president is elected yearly, I think five or six years should be ample for him. I believe in passing school board memberships around. The rising generation recently out of school are entitled to recognition; they will be closer to the education of the present and its needs than will we of the generations of the past. New blood frequently brought into the school board means new ideas, more spirit and more "pep" in our school systems. There are always enough hold over members on a board to keep the balance of power so that new members cannot run away with things without the approval of their fellow members.

The opinion of my preacher friend is a good guide for we school board members, past, present and future, to think of and follow: "It's better to leave while they still want you to stay than it is to stay so long that they'll wish you'd left years before."

**DR. F. C. SCHURMEIER**  
President, Board of Education,  
Elgin, Illinois

Dr. F. C. Schurmeier is now serving his second term as president of the Elgin board of education, having previously served two three-year terms as a member of the board. He was first elected to the board in 1917.

His administration of the work of the board has been characterized by promptness in starting meetings and dispatch of business. In his congenial but firm manner of presiding, he has been able to further the interests of education in Elgin by receiving the sincere cooperation of all twelve board members.

The analysis of schoolhousing needs in solving the problems of congestion, together with a proposed plan of reorganization and a building program, has been led by Dr. Schurmeier as head of a special committee styled the ways and means committee. He has also exhibited much initiative in the opening and furtherance of special help rooms and open air work in the school system. His enthusiastic support of the first high school summer session, just completed, had much to do with making it an unqualified success as measured by the school patrons. The varied and broad inter-



**DR. F. C. SCHURMEIER,**  
President Board of Education,  
Elgin, Ill.

ests of Dr. Schurmeier in educational work have been carried over into the State School Board Association in which he has taken a prominent and active part.

Dr. Schurmeier graduated from Northwestern College at Naperville, Illinois, in 1899. He received his M. D. degree from Rush Medical College in 1902 and that same year located in Elgin. In 1916 a Fellowship in the American College of Surgeons (F. A. C. S.) was conferred upon him. He is at present one of the most prominent surgeons in northern Illinois. At his present age of 52 he has become an important factor in the civic and church life of Elgin, aside from his medical and educational services. His family consists of a wife and two boys, one in high school and the other in the University of Chicago.

#### THE OLD-TIME MCGUFFEY READER

"Certainly the first editions of McGuffey's readers seem as quaint as an old dagguerreotype or grandma's spinning wheel," says a writer, who also reports that a full set of these old readers had been acquired by the New York public library.

These readers were popular between the years of 1836 and 1890, during which period fully a half million copies were sold. The earlier editions of the first readers sold at 12½ cents per copy. The author was Dr. William Holmes McGuffey, a Scotch clergyman, who lived at Oxford, Ohio, where the first readers were prepared.

The readers dealt with the horrors of whiskey drinking. They told the story of "The Old Soak" and of "The Whiskey Boy." Other reading lessons taught the pupils that it is cruel to drown kittens and pull off flies' wings, that good girls beg mamma to let them hem a frill for her cap, that noble St. Bernard dogs rescue travelers lost in the snow, that boys must not lie, steal, be rude or speak bad words.

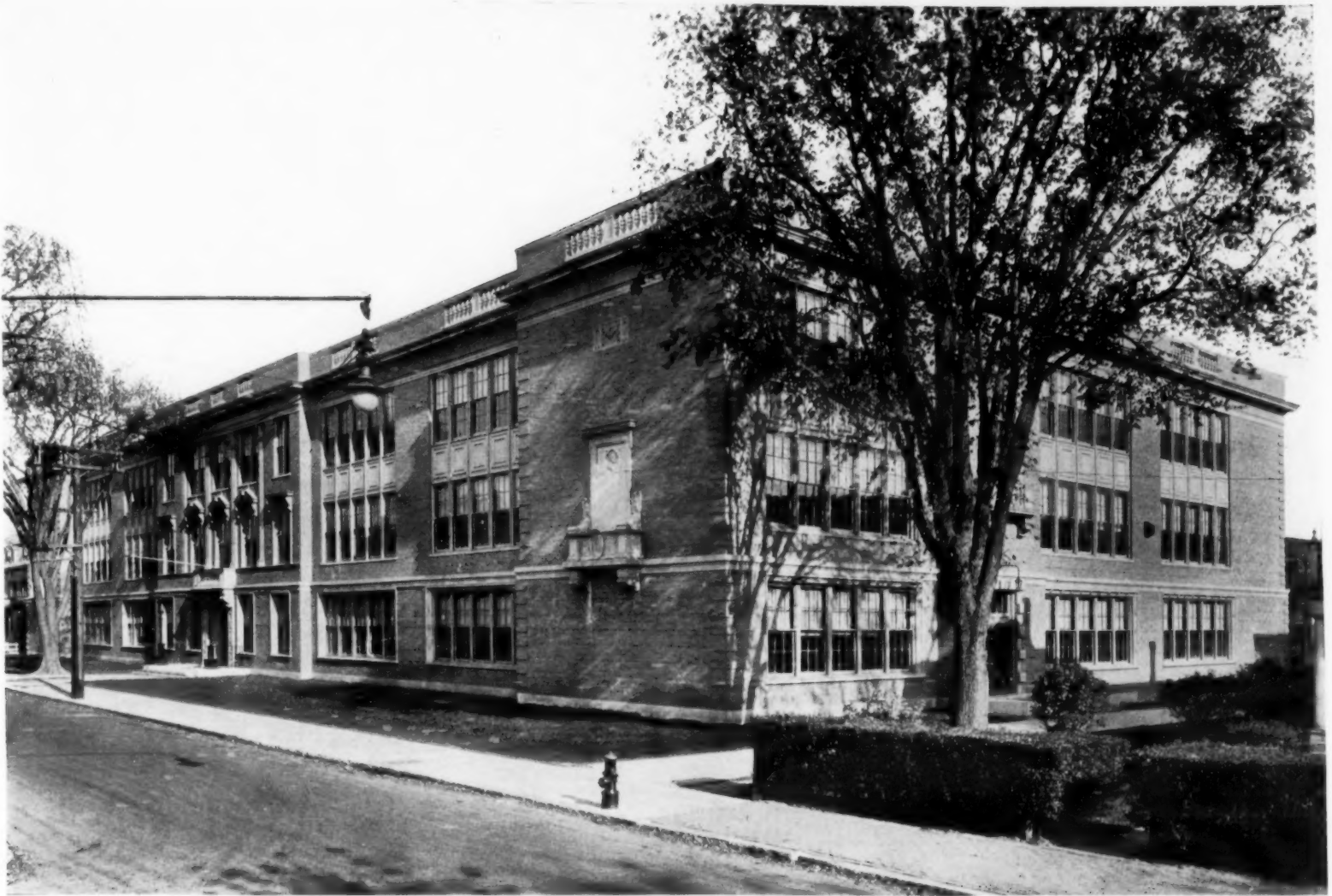
One authority phrases it, they are "readers which have been recognized as formers of good habits of action, thought and speech for three-quarters of a century, which have taught a sound morality to millions of children without giving offense to the most violent sectarian, which have opened the doors of pure literature to all their users."

#### A Bequest for the Portland Schools

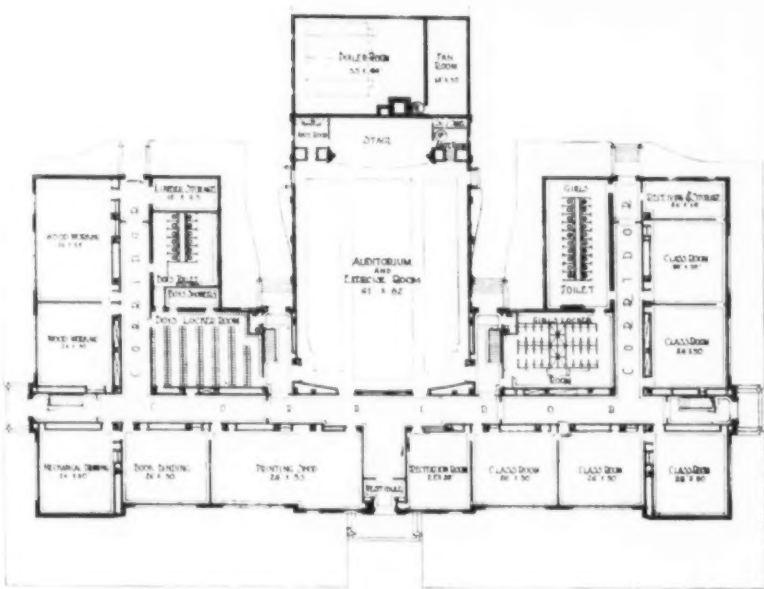
The Portland, Oregon, schools were willed the sum of \$200,000 by the late John L. Vestal, a druggist, who had lived in the city for 45 years. He was a widower and childless, but a great lover of children.

The executors of the will are Frank S. Pickering, president, and William F. Woodward and Frank L. Shull, members of the board of education. Mr. Woodward and Mr. Vestal were chums 43 years ago, and it is believed that a chance remark made by the former led the latter to give his fortune to the schools.

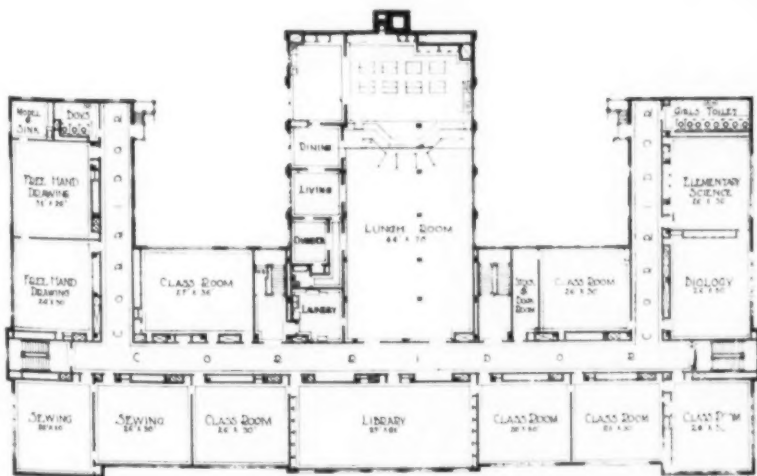
The Portland board of education has not as yet determined how to apply the gift, but it is believed that the same will be kept intact and that the earnings only will be applied to some phase of school activity.



GENERAL VIEW



FIRST FLOOR PLAN



THIRD FLOOR PLAN.



DETAIL.

NORTHEASTERN JUNIOR HIGH SCHOOL, SOMERVILLE, MASS.  
 Ritchie, Parsons & Taylor, Architects, Boston, Mass., and Clearwater, Fla.





AUDITORIUM, NORTHEASTERN JUNIOR HIGH SCHOOL, SOMERVILLE, MASS.

## Greater Boston Schoolhouses

Designed by Ritchie, Parsons and Taylor, Architects and Engineers, Boston, Mass.

The following form has been used by the Department of Superintendence, National Education Association of the United States for the purpose of gathering information concerning school building costs:

Town or City..... State.....  
 Kind of School (Junior or Senior High School).....  
 Year of Erection.....  
 Number of pupils accommodated.....  
 Cost of Building.....  
 (Including heating and ventilation, but exclusive of grounds and equipment.)  
 Cubic feet in building.....  
 Cost per cubic foot.....  
 Cost per pupil accommodated.....  
 Total floor space.....  
 Percentage of floor space devoted to:  
 Corridors and Stairs.....  
 Toilet rooms.....  
 Locker rooms.....  
 Offices, rest rooms, and store rooms.....  
 Physical education (other than playrooms).....  
 Play rooms.....  
 Art and music rooms.....  
 Science laboratories.....  
 Manual training rooms.....  
 Domestic Science rooms.....  
 Study rooms.....  
 Auditorium.....  
 Class (or recitation) rooms.....

Total cost of School, including grounds and equipment.....  
 Type of construction.....

All this information is necessary in order to obtain some guide to comparative costs and for purposes of comparison for studies in connection with specific problems. It is generally recognized, however, that there are so many local factors which must be considered in attacking and arriving at the one best solution of a particular problem at hand, that the construction of each building is a new problem and demands its own peculiar solution. These factors include administration, curriculum, school population, rate of increase of population, educational activities, degree and tendency of future development of each of these activities and their influence upon school administration and curriculum, availability of appropriations to carry out a definite expansion program, the program itself which is affected by local conditions, selection of available sites, including both the general location with reference to the school system and school population; the particular lot with its own physical characteristics of grade, nature of soil and subsoil,

natural drainage and climate; availability of labor, material, and transportation; business and seasonal cycles, etc., all of which demonstrate the necessity of a thorough study of local conditions to meet the particular present and future needs.

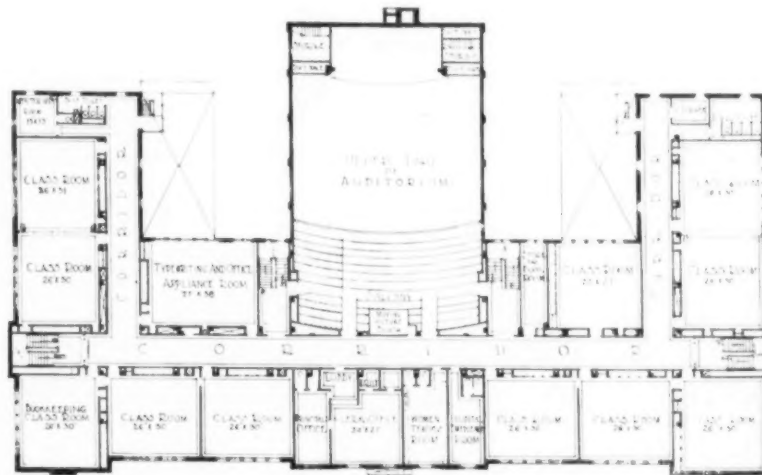
In employing a guide such as outlined above, therefore, it becomes necessary to consider each of the items listed in the guide with relation to the existing local situation. Thus, the items in the guide assume relative values more especially those under "percentage of floor space devoted to," and a nearer conclusion is reached insofar as the particular problem is concerned at least, with regard to whether the cost per cubic foot or the cost per pupil accommodated is the better standard of comparison; and in the final analysis, both having been given careful consideration, which is the more important and should be given the greater emphasis.

From the viewpoint of economy of operation, if the school building is considered a plant which is turning out pupils trained to established standards, then the product of the plant is pupils; and although the cost per cubic foot

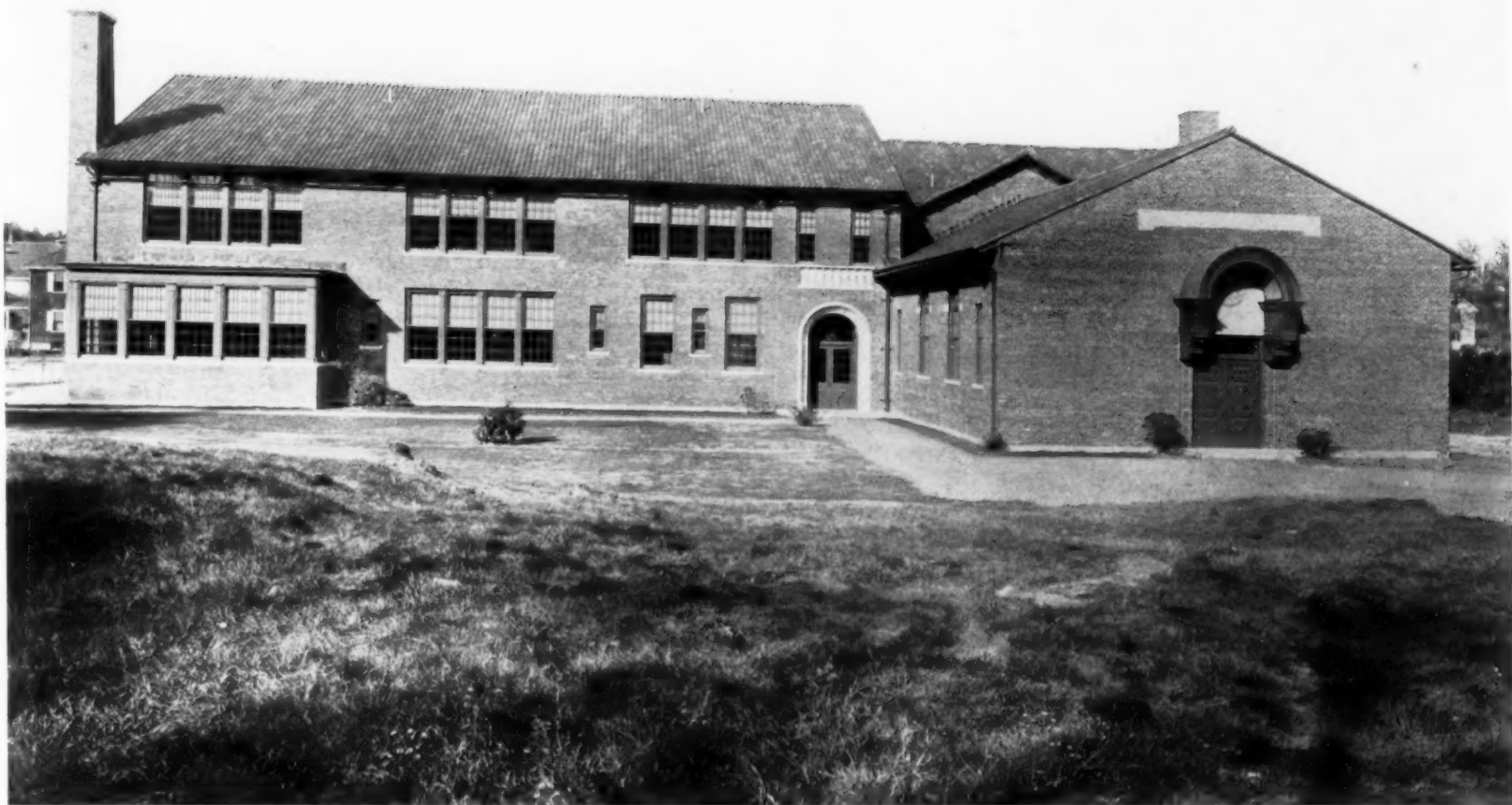


VIEW FROM THE REAR.

NORTHEASTERN JUNIOR HIGH SCHOOL, SOMERVILLE, MASS.



SECOND FLOOR PLAN.

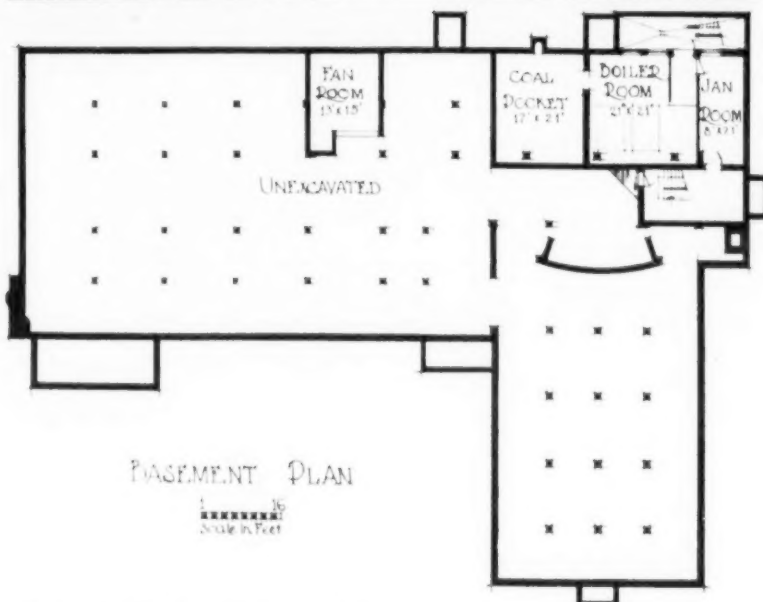
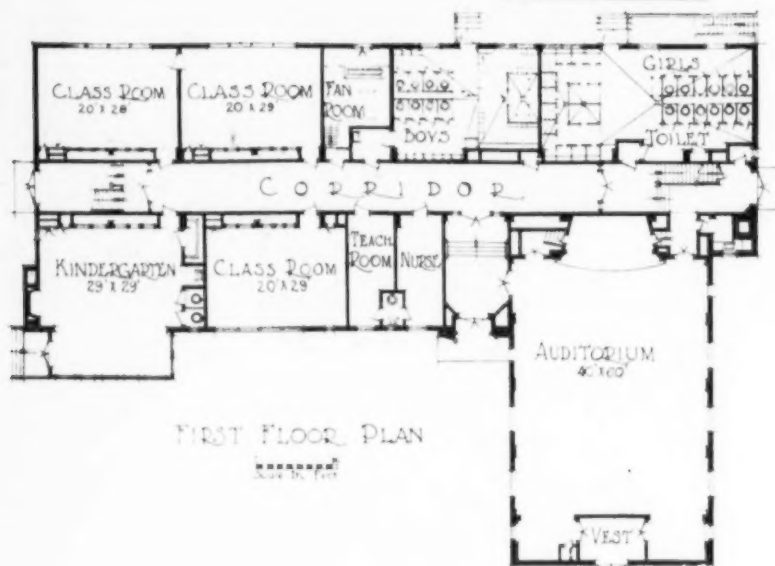
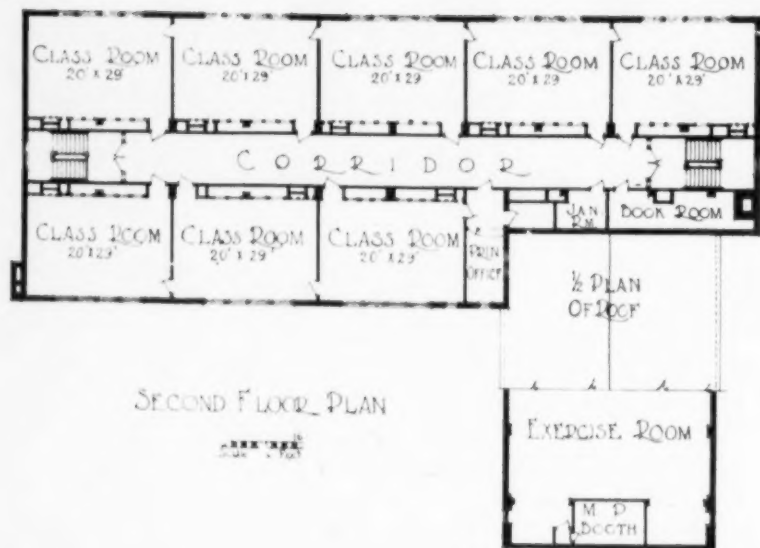


LINCOLN SCHOOL, WINCHESTER, MASS.  
Ritchie, Parsons & Taylor, Architects, Boston, Mass., and Clearwater, Fla.



MYSTIC SCHOOL, WINCHESTER, MASS.  
Ritchie, Parsons & Taylor, Architects, Boston, Mass., and Clearwater, Fla.





FLOOR PLANS AND EXTERIOR VIEW, LINCOLN SCHOOL, WINCHESTER, MASS.  
Ritchie, Parsons & Taylor, Architects, Boston, Mass., and Clearwater, Fla.

representing the actual and comparative cost of the building construction is important to consider, the cost per pupil accommodated is still of more importance in that it defines the actual and comparative cost of the building in terms of the product of the institution which is the ultimate economical objective to be reached, at the same time advancing the high architectural and educational standards.

Still considering the above viewpoint, then, the items under "percentage of floor space," especially class or recitation rooms, require closer study with relation to the existing conditions of the section of the country and would lead to more nearly accurate results than would

be possible in making the same comparison of these items against the varying conditions throughout the whole country, although a national comparison of the floor space devoted to all items collectively grouped under administration, corridors, stairs, toilets, etc., and those grouped under instruction, in fact, any data obtainable, cannot fail to be of value in an investigation concerning school building costs.

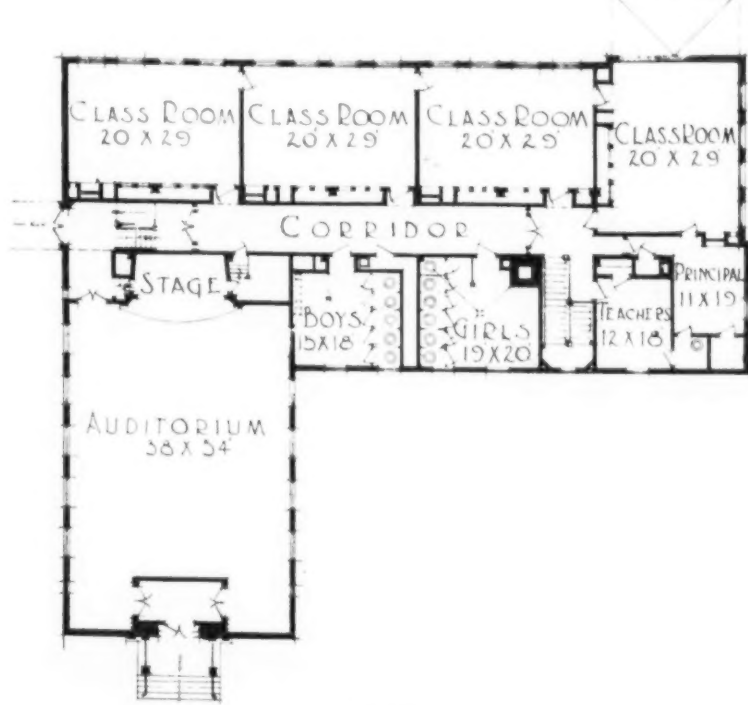
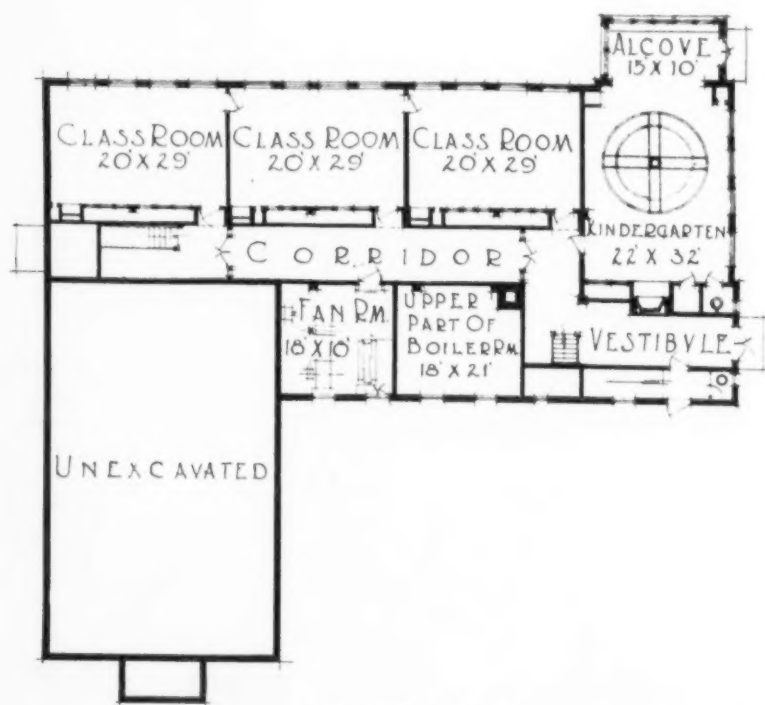
So it is with the thought that the descriptions of a few schoolhouses recently built or under construction in Boston and surrounding cities might add a little more to the data already accumulated and assist somewhat in the survey of this type of construction within a section of

the country and possibly serve also as information of value in comparison of schoolhouse costs throughout the country that the following matter is published.

#### Everett High School, Everett, Mass.

The new Everett high school, at Everett, represents the very latest thought in the construction of schoolhouses, and without question is one of the finest school buildings in New England.

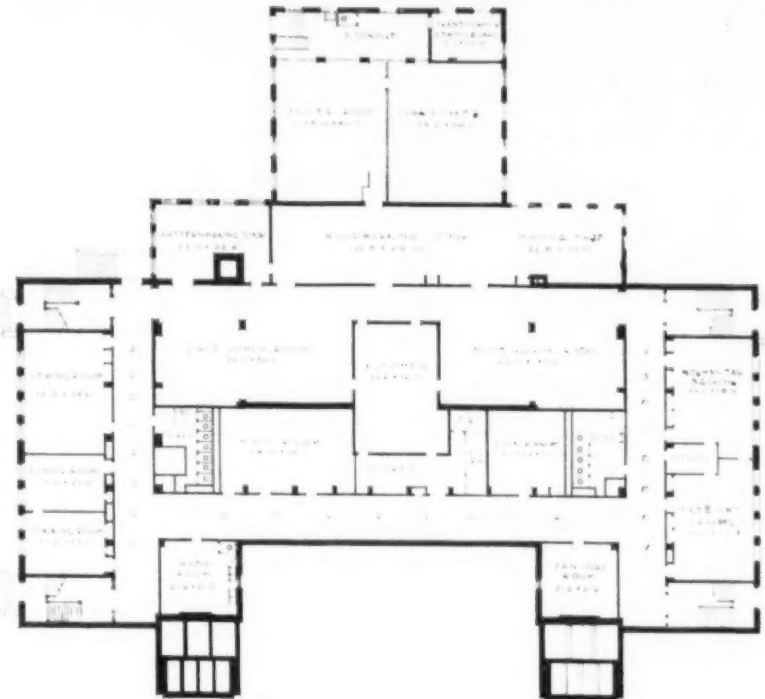
The exterior of the building is treated in a very simple manner in Italian Renaissance style. In the main vestibules of the Broadway entrance to the lobby, the ceilings are Florentine with a bronze bas-relief frieze extending



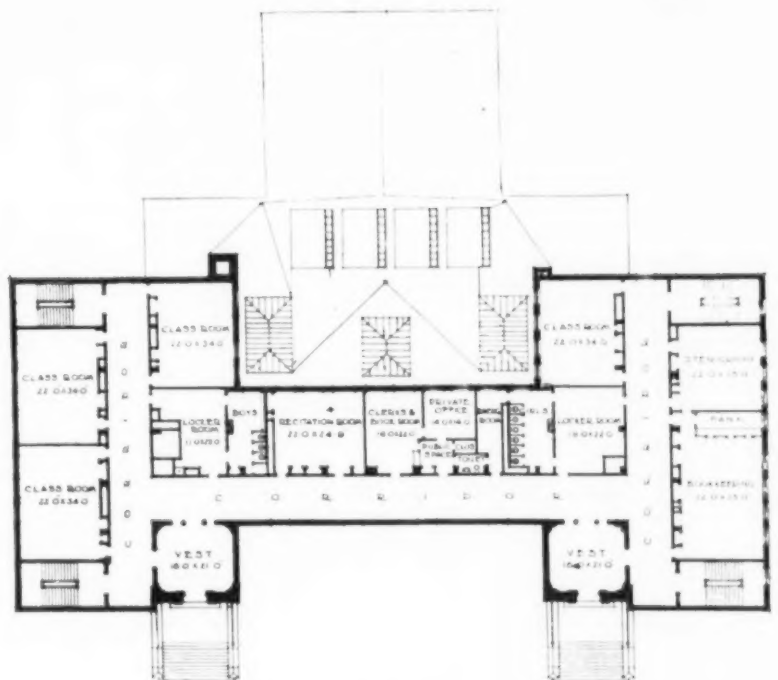
MYSTIC SCHOOL, WINCHESTER, MASS.  
Ritchie, Parsons & Taylor, Architects, Boston, Mass., and Clearwater, Fla.



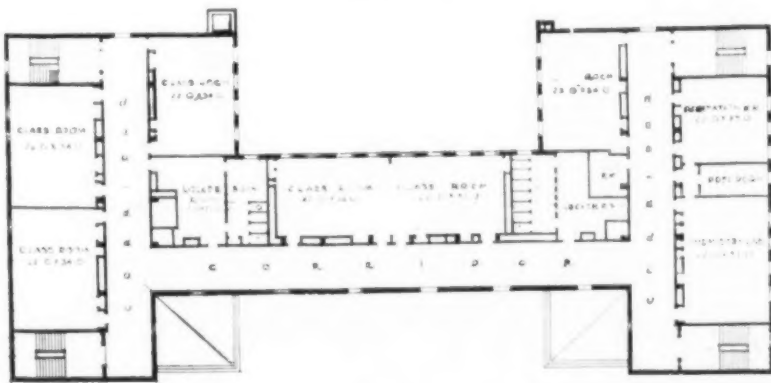
NORWOOD HIGH SCHOOL, NORWOOD, MASS. Ritchie, Parsons & Taylor, Architects, Boston, Mass.



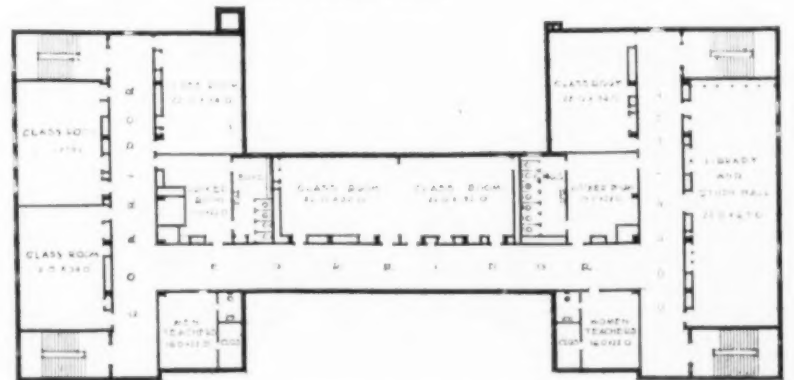
GROUND FLOOR PLAN.



FIRST FLOOR PLAN.



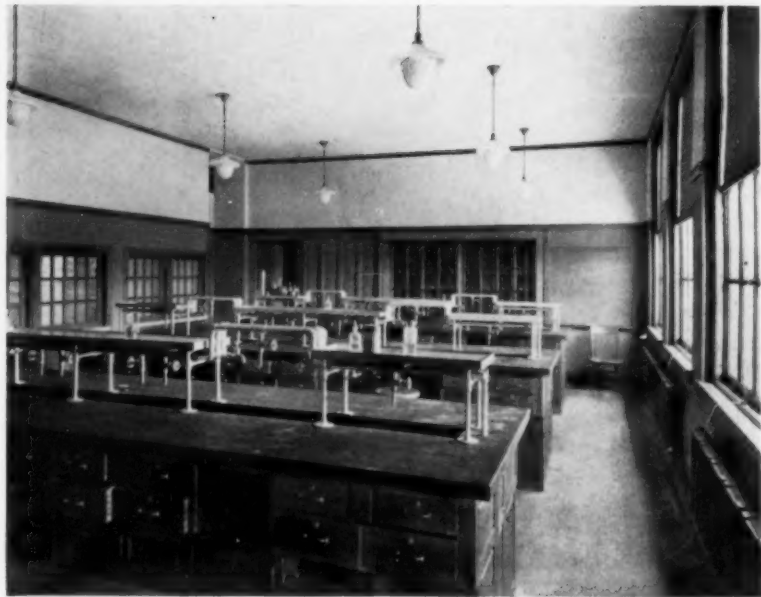
THIRD FLOOR PLAN.



SECOND FLOOR PLAN.

FLOOR PLANS OF THE NORWOOD HIGH SCHOOL, NORWOOD, MASS. Ritchie, Parsons & Taylor, Architects, Boston, Mass.





CHEMISTRY LABORATORY, NORWOOD HIGH SCHOOL, NORWOOD, MASS.

the entire length of the first floor corridors. The walls of the corridors are lined with tile throughout, and the floors are of terrazzo. The building is substantially a fireproof structure, with brick and stone exterior walls, fireproof floors, fireproof corridors, and stair towers.

The number of pupils that are accommodated in home stations is 1,550. Construction was completed in the fall of 1923 at a total cost, including all equipment, of \$753,709.00. The building contains 36 classrooms.

All classrooms and other home station rooms are equipped with the Chicago type wardrobe, doing away entirely with the old-fashioned large locker rooms, thus making each home station room a complete unit in itself, providing in that room accommodation for the hanging of wearing apparel. The floors of the wardrobes are of asphalt so that moisture drained from the garments and umbrellas will be taken care of. Every wardrobe is ventilated with the fan system so that there is constant supply of air passing through the wardrobe, thus drying during the school session the wet clothes that may be hung there during the morning. In working out the solution for this problem various schemes were considered, including built-in lockers properly ventilated and the arrangement described was deemed advisable in this case.

The auditorium with a seating capacity of 1,700, is equipped with all the latest devices for amateur theatricals and for the general assembly purposes of the school.

The gymnasium, which is approximately 54'x106' may be subdivided so that each half is available for use as a gymnasium unit, one-half to be used by girls and the other by boys, and the screen dividing the two is removable so that the entire area may be used for inter-scholastic purposes and such affairs as school dances. Immediately adjoining the gymnasium are the shower and locker rooms for boys at one end of the building and for girls at the other end.

The domestic science laboratory is a very complete unit, and adjacent to that is a suite of five rooms consisting of living room, dining room, bed room, kitchen and bath, affording every opportunity for instruction in the proper care of the home.

#### Northeastern Junior High School, Somerville, Mass.

This building is one of a group of junior high schools that have been provided for by the city, the others being existing school buildings which are being altered and enlarged to meet the needs of the school department.

The structure is three stories in height but without the usual basement. The main portion of the ground floor is devoted to rooms for instruction, the balance being devoted to an assembly hall and the heating plant. The building has a frontage of 245 feet with wings at either end extending for a distance of 125 feet. It accommodates 1,155 pupils and cost \$486,727. The heating plant is very complete and was designed especially for economy in operation. The fresh air is taken in by fans, heated and delivered to the rooms in the usual manner. Instead of then exhausting the warm air to the atmosphere, it is returned and passed through the air washers where it is filtered, additional warm fresh air added to make up losses and supplied again to the rooms, thus saving the heat units in the exhaust air, accomplishing material saving in coal consumption, and increasing the efficiency of the plant.

On the main axis is located the assembly hall

and exercise room, with entrances from the main lobby as well as from the independent entrances opening on the court yards at the rear of the building. In these entrance halls are stairs leading to the second floor, serving both classrooms and the balcony of the hall, and provision is made to facilitate future construction of a gymnasium. On the ground floor are shops for woodworking, bookbinding and printing and rooms for sewing and dressmaking.

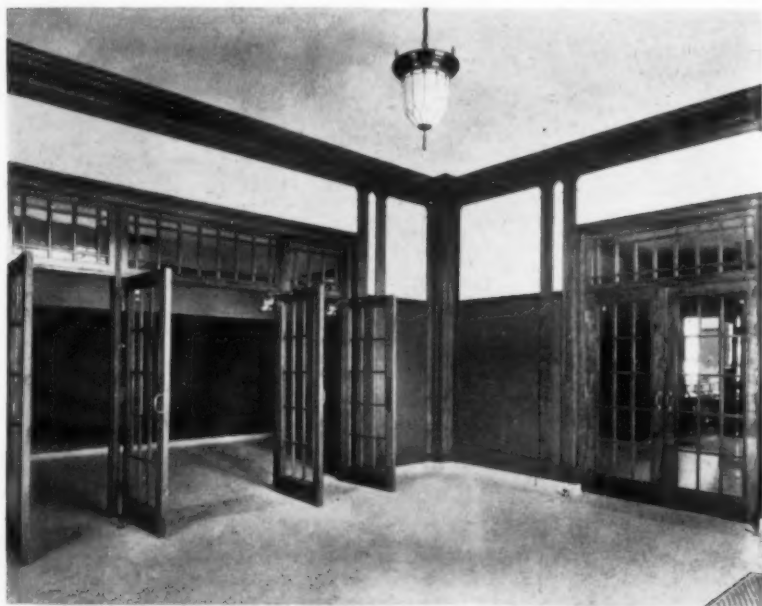
On the main axis toilet rooms, shower baths and locker rooms are also found on this floor. The boiler room with fans, pumps and other apparatus of the heating and ventilating system have been placed in the rear of the assembly hall, and outside the main building.

The principal's offices, emergency room and teachers' room have been placed on the second of the three floors in a location which lends itself to convenience and efficiency in administration. On this floor are the library and consultation rooms with rooms for the special instruction in typewriting, bookkeeping and other subjects pertaining to business training. On this floor there are also special rooms to be used for instruction in elementary science.

The area over the assembly hall contains a large room used as a lunchroom and recreation



ENTRANCE LOBBY, NORWOOD HIGH SCHOOL, NORWOOD, MASS.



ENTRANCE DETAIL, NORWOOD HIGH SCHOOL, NORWOOD, MASS.



CORRIDOR, NORWOOD HIGH SCHOOL, NORWOOD, MASS.



EXTERIOR VIEW.



MAIN ENTRANCE.  
EVERETT HIGH SCHOOL, EVERETT, MASS



TABLET ON END.  
Ritchie, Parsons & Taylor, Architects, Boston, Mass.





AUDITORIUM STAGE, EVERETT HIGH SCHOOL, EVERETT, MASS.

hall and in addition the rooms for instruction in domestic sciences. The latter rooms are so placed in relation to the lunchroom that the rooms used for instruction in cooking also serve as the kitchen in which food for school lunches may be prepared. This department contains a suite consisting of a living room, dining room, chamber, bath room, kitchen and laundry to be used in connection with instructions in house-keeping.

In addition to the special rooms which have been mentioned there are 25 general classrooms and recitation rooms. Each floor is provided with toilet room for both boys and girls. The assembly hall has a seating capacity of 1,200. The building is constructed with exterior walls

of pressed brick with stone trimmings, and is strictly fireproof throughout.

#### Norwood High School, Norwood, Mass.

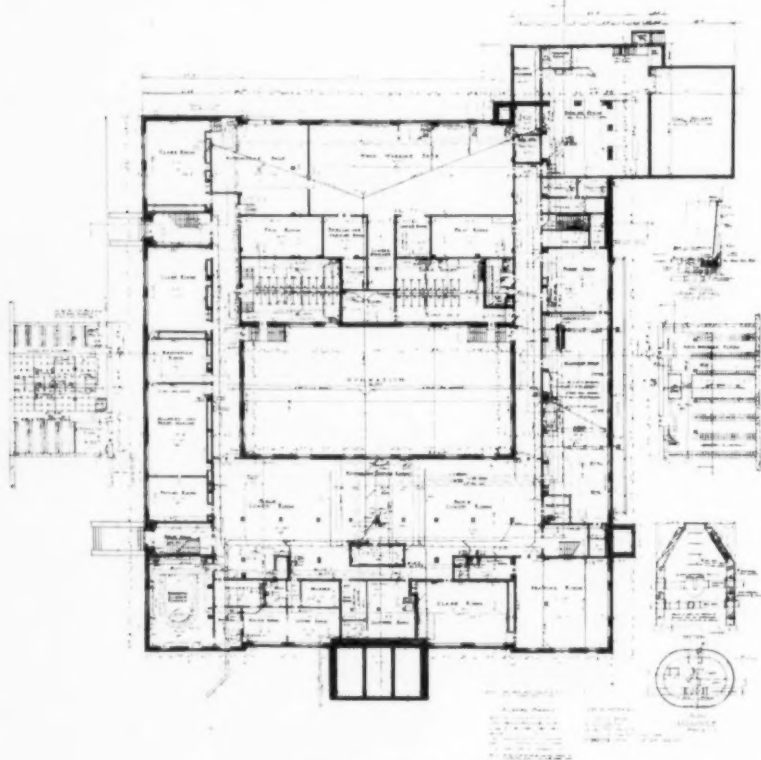
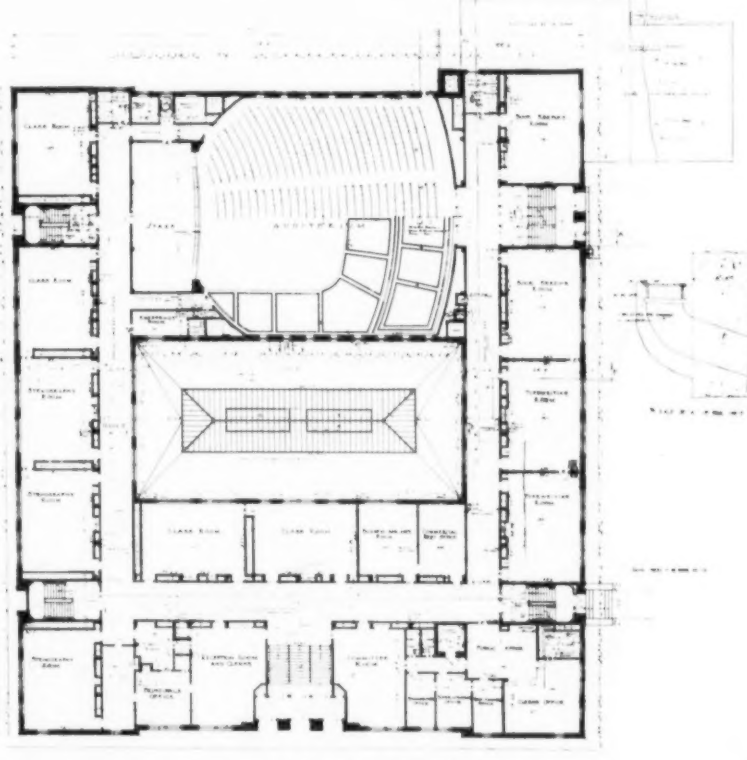
The Norwood high school is of Georgian style of architecture, double "L" shape in plan with fireproof corridors and stair towers throughout. It accommodates 800 pupils and cost \$281,280.84, together with its junior high school wing. Construction was completed in the fall of 1919.

The ground floor contains shops, sewing rooms, drawing room, boiler room, kitchen and lunchrooms, fan room, locker and storage rooms and toilets. On the first floor are classrooms, administration offices, typewriting, stenography and bookkeeping rooms, locker

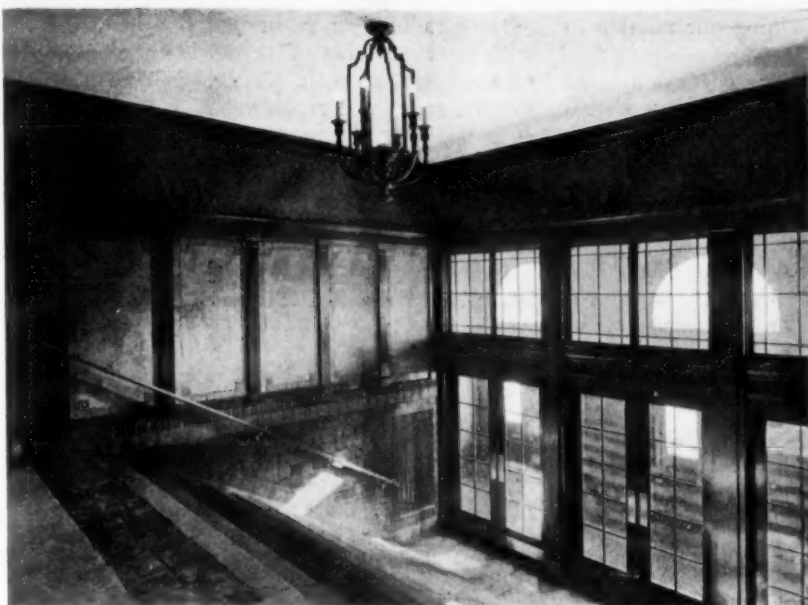
rooms and toilets. Classrooms, teachers' rooms, library, study room, dressing rooms, lockers and toilets are on the second floor.

The chemistry and physics laboratory and general science laboratory are on the third floor together with more class and recitation rooms, storage, lockers and toilets. The interior is of fireproof construction with regard to floors, corridors and stair towers. The basement floor will contain shops, showers, classrooms, lunchroom, domestic science and domestic science suite, and boy scouts' room.

The first floor contains administration offices, classrooms, the articulated gymnasium and auditorium with seating capacity, including balcony, of 1,200 people. A folding door parti-

BASEMENT PLAN.  
HIGH SCHOOL, EVERETT, MASS. Ritchie, Parsons & Taylor, Architects, Boston, Mass.

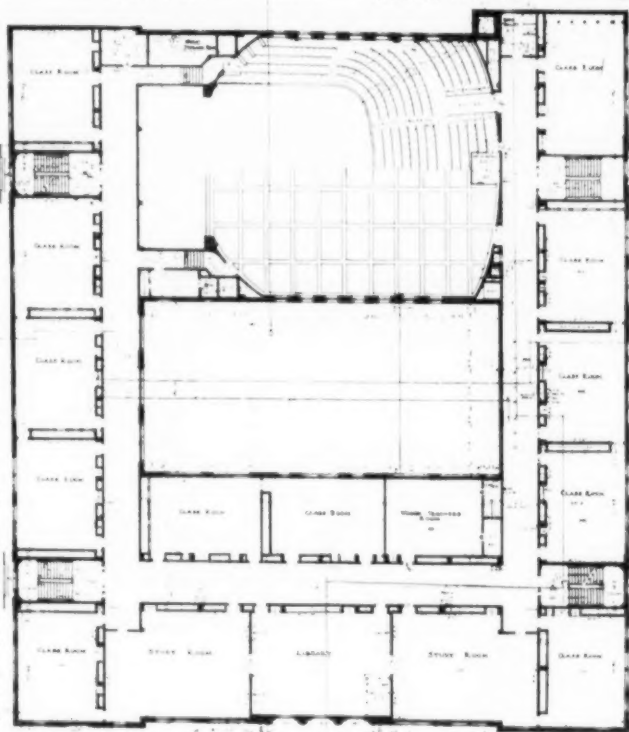
FIRST FLOOR PLAN.



ENTRANCE LOBBY, EVERETT HIGH SCHOOL, EVERETT, MASS.

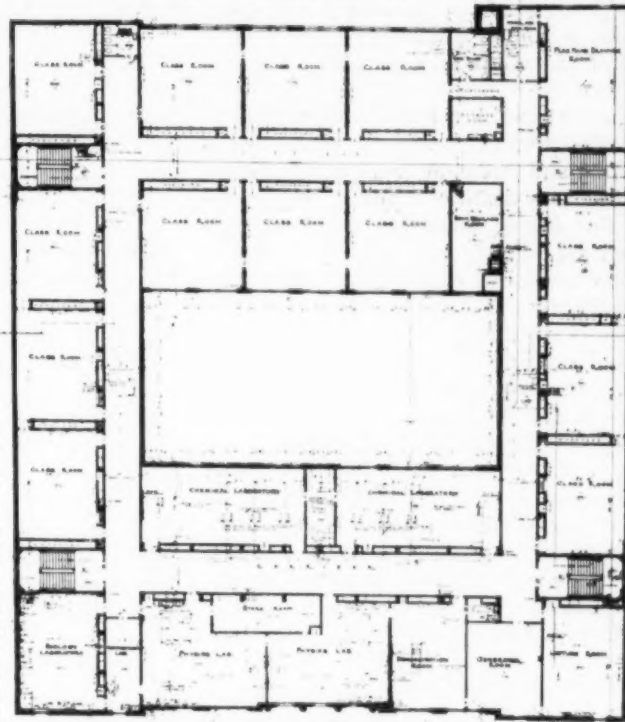


AUDITORIUM FROM THE REAR, EVERETT HIGH SCHOOL, EVERETT, MASS.



SECOND FLOOR PLAN.

HIGH SCHOOL, EVERETT, MASS. Ritchie, Parsons &amp; Taylor, Architects, Boston, Mass.



THIRD FLOOR PLAN.

tion separates the gymnasium and auditorium, both being lighted by skylights and side lights. On the second floor are classrooms and library. The building will have a frontage of about 213 feet and depth of about 118 feet. It will accommodate 850 pupils, and will cost, including equipment, \$450,201.

#### Lincoln School, Chapin District, Winchester, Mass.

This building is of a rather unusual type and different from the usual accepted design of public school buildings. The style is Northern Italian Renaissance, with a fire-flashed red tile roof, and a great deal of color is used in the overhanging cornice and main frieze. The exterior walls are of rough water-struck brick with raked joint. All trimmings are of warm tone bathstone. There is no basement to this building, except the boiler room, coal pocket, and fan room.

On the ground floor level there are two progress classrooms, one Americanization classroom, complete kindergarten unit, and a combination auditorium-and-exercise room to seat four hundred, teachers' room, nurses' room, toilet and shower facilities for both boys and girls. These are so arranged with direct approach from the playgrounds that they may be used for community work during the summer months without necessitating keeping the remainder of the building open. In the floor above there are eight typical classrooms, prin-

cipal's office, and book storage. This building accommodates 420 pupils, was finished in the fall of 1924, and cost \$144,507.

#### The Mystic-Gifford School, Winchester, Mass.

This is an elementary school of red brick with stone trimmings and pitch roofs of Vermont slate. Advantage was taken of the natural grade so that only the boiler room and coal pocket are located in the basement.

On the first floor are classrooms, a complete kindergarten unit, bicycle room, fan room and toilets. The auditorium seating three hundred, classrooms, principal's office, teachers' room and toilets are on the second floor. The building accommodates 280 pupils, was finished in December, 1924, and cost \$90,661.00.

#### The Chicago Teachers' Council Settled

The contention in Chicago over the meetings of the teachers, namely, whether they were to meet within or without school hours has been ended. The kind of teachers' council to be conducted has been agreed upon by the board of education.

Replying to the request of a committee of teachers that a former plan of councils, in which participants were paid their salaries for meetings eight times a year during which the children were sent home from the classes, Superintendent William McAndrew said:

"A record so barren of educational results as is presented by the councils as a result of their previous meetings, does not justify returning

to the old plan. The usage of those councils of excluding principals from the meetings, I cannot approve. The vague and absurd allegations of timidity of teachers in the presence of their principals is contradicted by statements of class teachers and by my personal observation. If anyone should be so foolish as to charge teachers in general with any particular fault, timidity would not be one characteristic of Chicago teachers. The organization of school systems for the purpose of giving thorough and efficient education is not a complex system. In education, as in business, the simpler the system the better. The usual arrangement: the school as a unit, the principal as official leader, no official bypass from the teachers to the superintendent, cutting out the principals can be approved by anyone who has regard for experience, discipline, and efficiency."

"The superintendent's reorganization of councils proposes a council of sixteen, made up of representatives elected by sixteen designated voluntary organizations of teachers, principals and superintendents. The council is to meet on call of the superintendent of schools and to advise him on such matters as he designates. He offers the use of school buildings once a week for meetings of teachers' organizations, but refuses to dismiss the children to give way to such meetings. The board of education approved his scheme.





## THE AMERICAN School Board Journal

WM. GEO. BRUCE }  
WM. C. BRUCE } Editors

### EDITORIAL

#### THE BIG AND LITTLE IN SCHOOL ADMINISTRATIVE EFFORT

There is a tendency, and quite a natural one, to direct the attention of those concerned in school administration to the few large systems as against the many smaller systems. The larger school plant, with its heavy investments, its elaborate organization, its marvelous personnel, its large school constituency and splendid budgets, is bound to command attention at the hands of an enterprising press and a watchful school public.

On the other hand, but few of the small town school problems which are daily multiplied a thousand-fold and stretch over an entire nation, are dignified into definite forms of public discussion. But few of them find their way into the printed page.

The many thousands of men and women who work in the byways of American school life and who contribute their mite each day to the progress and stability of a great nation remain hidden and unsung as far as the great stream of human activity is concerned. And yet they encounter problems and must solve them. Occasionally, a voice from the wilderness penetrates the maze of congestion and turmoil of a day only to remind us that school problems are not all confined to large population centers.

Here is what a rural schoolmaster, Roy M. Austin of Montana, who is grappling with the rural school problems in a masterful way, says in characteristic western fashion: "I realize that the P. D. has his head in the air and rarely gets out in the sage brush; that all specialists are in the big schools, and that the professional dopesters and publicity men are always near the concrete walks and car lines; while we 'birds' who are in the wide spaces don't know the writing game, and if we do, are too busy with the problems that roll up right in our faces."

This rural philosopher cries out with the ring of wisdom and truth. What is usually deemed to be the little fellow who deserves but meager attention is in reality, as far as his numerical strength is concerned, a fellow of considerable size and worthy of much attention. The number of children taught in the rural districts is by far greater than that taught in the larger cities. And yet, the nation's great educators remain "near concrete walks and car lines" and do not meander along the rough graveled road that leads to the country schoolhouse.

There are, however, progressive educators in large centers who have awakened to the obligation that is upon them. Superintendent Frank Cody of Detroit, in a public address, recently said: "We as city educators must learn to think in terms of the state and do our share toward improving the state school program. We must have consolidated schools in the rural districts. The school budgets must be adequate, state support equitable, and teachers properly trained. We cannot live wholly unto ourselves

and feel that we are performing our mission as educators."

The rural schoolmaster's outcry against the common neglect accorded his problems should also go beyond the ear of the educational leaders of his day. It should reach the legislator as well. Whatever may be said on the score of changes in school laws to be engaged in by the several state legislatures, the rural school problem is by no means the least among them.

The big question that is pressing its way for solution in the legislative halls of many states this winter is the one of state school support. Equality of educational opportunity for every child involves adjustments between the poor and the rich school districts, the large and the small school systems, and reforms in methods of taxation and the distribution of state funds.

It is here that the leading educators of the land should assert themselves, stand ready to throw the weight of their influence toward pleading the cause of the rural school child and securing a solution to the one unsolved problem in American education—the rural school.

#### THE BAROMETER OF PUBLIC CONCERN IN SCHOOL ADMINISTRATION

The interest which the public manifests in the administration of its schools is as variable as is the weather in mountain regions where rain showers alternate sunshine in quick succession. In one town things are as quiet as a graveyard while in another the noise resembles the battle of Marne. The one represents peace and harmony in school affairs; the other a school row in which everybody takes a hand.

Travel through the effete East and things are in the main quiet. At Woodbridge, N. J., the local editor will tell you that "for some unaccountable reason the people lay very little stress on the annual board of education election. Each year but a handful of voters take the trouble to go to the polls to determine the personnel of the body of men that is to have charge of their schools."

Evidently the good people of Woodbridge have confidence in the character and fitness of those who run the schools. Hence, there is no need for bothering about going to the polls. They believe in letting well enough alone.

Then jump over to Berkeley, California. Here everybody takes a whack at the school board. When they get tired with this pastime they hit the superintendent of schools. All this happens because some months ago an employe turned out to be an embezzler. The grand jury said the school board might have been more careful. And then some of the people thought the superintendent ought to at least have known that the employe was a crook long before any one saw him. That's fair. A superintendent ought to know everything. But finally the superintendent was exonerated and the noise has subsided somewhat.

Then hike back eastward once more and stop over for a moment at Wilmington, Delaware. Here the board of education is striving for financial independence—freedom from city council domination. Well, if you heard the local newspaper editors shout you would get the notion that these school board fellows were about to loot the town. Interest in school administration! Lots of it!

And so we might continue the illustration. Suffice it to say that a board of education may conduct its work in peace for many years but once it becomes a target for public criticism there are many who will take a shot at it. Let some one disagree with some act, some policy, some departure and make a noise about it, and no one will complain that there is a lack of concern in school administration affairs.

As a rule a lively interest in school affairs simply means trouble—and lots of it. At least,

surface indications mean that somebody differs with somebody else. The pull is either forward or backward, or both. Somebody gets hot under the collar and explodes. But, true progress is not always obtained without some blasting into the rocks of an ultra-conservatism. Noise is bound to ensue. That is an American characteristic which even finds its way into the calmer precincts of school administrative activity.

#### PROGRESS IN MEETING SCHOOL BUILDING SHORTAGE

A few years ago a well known schoolhouse expert made the startling statement that a billion dollars would have to be expended in order to meet the schoolhouse shortage of the United States. This amount has now been expended and more, too, and yet the momentum in the construction labors has not been materially slackened. The pupil population is continually growing and shortages in school seatings still exist. The financial figures involved in the school construction projects of the past four years are, therefore, most illuminating.

In the year 1921, the school bond sales reached the sum of \$243,639,448. While the money actually expended during the same year was \$243,833,000, there were 2,727 projects which provided 40,853,000 square feet of school housing.

In 1922, the bond sales went up to \$278,568,362, while the contracts let reached the sum of \$303,346,000. This expenditure involved 3,301 new school building projects and provided 54,593,000 square feet.

In 1923, the school bond sales jumped to \$289,890,510, while the contracts let aggregated a total of \$272,530,000. The number of projects dealt with that year was 2,768 and the additional floor space provided was 44,432,000 square feet.

A much higher figure on bond sales than had occurred in the three previous years was reached in 1924, being \$308,676,589, while the contracts let for the same year reached the stupendous figure of \$363,338,000. The number of school buildings for that year (figures for two months lacking) was 3,334, while the number of square feet of space provided was 57,473,000.

A summary shows that the total bond sales for the four years were \$1,120,773,909, and that the total contracts awarded amounted to \$1,183,047,000. The fact that the contracts let during this period exceed the bond issues by some sixty million dollars must be explained in bond issues secured before 1921, in loans engaged in without the issuance of bonds, and funds secured through direct tax levies.

At any rate, the school administrators not only invested a billion dollars during the past four years in enlarging the nation's school plant, but expended one hundred and eighty-three million dollars besides.

This is a record which has not been duplicated in any other period in the nation's history or by any other country. It demonstrates that the American people believe in their own system of popular education and stand ready to support that system adequately and even handsomely. It further notes an absolute faith in a representative form of government and in the necessity of citizenship training therein.

#### EDUCATIONAL CONVENTIONS AND HOSPITALITY

When, some years ago, the leading American cities became ambitious in the way of providing large convention halls, their goal was the housing of national political conventions. But, since great political conventions are few and far between, some of these monster temples of public demonstration proved financial failures and prompted a reaction on the part of community



enterprise in the direction of smaller halls and more of them.

The educational gatherings of recent years, both state and national, have rivaled all political conventions, and have not only taxed the convention housing to the utmost, but have strained hotel accommodations beyond their normal capacity. Several state educational associations have grown so huge that no one city can house their conventions with any degree of convenience.

The great winter meetings of the Department of Superintendence of the National Education Association are confronted with the problem of adequate housing. Few cities indeed are equipped to accommodate the general sessions and to find a series of smaller halls conveniently located to receive the departmental meetings.

The hotel problem, too, has become a serious one. The educator wants to be comfortably quartered. In order to attend the several meetings in which he is concerned, he does not find it practical to be quartered in some distant resident district. At Cincinnati recently thousands of delegates were obliged to accept accommodations in private homes.

For the present, expediency suggests that only such cities as can approximately accommodate the great winter meetings be chosen. This limits the choice to less than a dozen American cities, and at the same time restricts the jumps to distant points of the country as this was the practice in former years.

At the same time, the enterprising city that sees a commercial value in large conventions, bringing within its gates great numbers of visitors, must also come to realize the necessity of constructing larger and more commodious convention halls. The city of Cleveland, in response to this need, provided recently a most modern and spacious auditorium. Other cities have done likewise. And still others are planning to do so.

The meetings of the department of superintendence of the National Education Association have become so important a factor in the educational life of the nation that they must not be discontinued. Nor ought they to be split into regional gatherings. The momentum of largeness as well as of content must be retained, even though convention inconveniences and difficulties are encountered.

#### SCHOOL ADMINISTRATORS AND THE SCIENCE OF TAXATION

There was a time when the American schoolmaster was as far removed from the science of taxation as he was from the art of preparing a chop suey dinner. The school administrator who was nearer the public treasury knew something about the financial needs of a school system but even he gave little attention to the manner of replenishing that treasury. He knew what funds were required to run the schools, but it remained for others to find the ways and means of supplying the funds.

The wide gap which has arisen in recent years between income and cost, caused by an expansion of the school service on the one hand, and the reduced purchasing power of the dollar on the other, has awakened an interest in the sources that must replenish the school treasury.

While the cost of government must be held within legal limitations consistent with the tax ability of both community and state, it nevertheless follows, that where inadequacy of support is encountered, an inquiry as to the remedy is in order. The question which here arises is not only whether the tax ability of the constituency has become strained, but also whether the tax burden is equitably distributed.

There is no doubt that the American system of taxation, which is based upon an antiquated theory of property values, is defective in operation and inequitable in results. But, a system of taxation which has been in operation since the foundation of the government cannot readily be dislodged. It, therefore, becomes a question of giving greater efficiency to the system we now have than to seek radical changes. And, that implies not only an equitable distribution of the tax burden, but the discovery of all taxable property as well.

The American school administrator, with commendable enterprise, and with a remarkable degree of expertness has penetrated the problem of school support, and has satisfied himself that the key to its solution is found in taxation. The schoolmaster no longer blames the board of education for an inadequate pay check. He begins to wonder why the tax machinery is out of gear.

Thus, the studies in school finance engaged in by leading educators in this country are beginning to lay bare the mysteries of taxation and to discover the inequities that exist there. Moreover, they see the remedy that must be applied if adequate school support is to be forthcoming.

#### PEDDLING THINGS IN SCHOOL

The practice of permitting traveling salesmen to enter the schools and address the pupils in the schools for the purpose of exploiting the sale of some article, or articles, is censured by the Press of Waterloo, Indiana.

"The pupil is asked to canvass the community for the articles that might be enumerated, and this is to be done, of course, 'out of interest for the welfare of the school,' or perchance for some

benevolent institution. The pupils, themselves, receive no compensation for their labor; but, the schoolroom is to receive some prize if all the pupils succeed in boosting the sales to a certain amount.

"The pupils are imposed upon in many instances, especially where they have been forbidden by their parents to take a part in such work of selling articles given them at school. It is very embarrassing to the pupils. The parents send their children to school to learn—not to peddle—and they are expected to get their lessons. Some pupils are required to do certain duties outside of school. For a pupil to be asked to do these various things embarrasses them, as they do not like to refuse, and at the same time do not like to do the things that their parents object to.

"The parent is also imposed upon. If the boy or girl takes goods from the schoolhouse to be peddled he or she is expected to either bring the goods back or the money. If a child loses the money the parent is expected to pay the loss. In some instances boys have been coaxed into spending some of the money and the parent is called upon to make up the shortage.

"And, again, the public is imposed upon. Many a housewife is called to the front door several times a day to answer the call of some small school boy or girl who wants to sell something in order that the schoolroom may profit by some sort of a prize. It matters not whether the article is of any value to the prospective purchaser, or whether they can afford the article offered, the boy or girl who is turned down goes away with an idea that such a person is a 'tight wad' or not in sympathy with the school.



THE EARLY SOWER!



## Living Up to the Ayres School Record

Fred J. Ward, Ismay, Mont.

Five years ago the Ayres report gave Montana first rank among the school systems of the several states. Since the publication of that report, which surprised the people of Montana quite as much as the rest, the legislative program of Montana has had a widespread interest and publicity.

No doubt the authors of that report thought that its publication would effect a spirit of friendly rivalry and stimulate something of worthy competition in school betterment. It may have had such an effect in those states who were placed farther down the list, but in the case of Montana the news of our greatness could not have come at a more inopportune time. As Miss Trumper said in her Billings address to the M. T. A.: "We still have to live down the flattering publicity of the Ayres report."

For at the time this report was published, Montana was entering the doldrums of her history. Three rainless summers and an unusually severe winter had left the agricultural industry in a state of collapse. A financial depression throughout the whole country beginning in 1920 helped to aggravate the situation still more. We heard stories of schools operating on a part time basis, of warrants being discounted, of departments closed, and trouble generally. One realizes in a time like that how few school officers and administrators can keep a tight rein and not be dismayed into strange political ways. For political discontent fell among us and through its fog no one could see which way we were going. Let it be said, however, that in spite of all the hardship the schools were kept open on a fair basis of efficiency.

### Heavy Load Upon Small Unit

If this crisis has shown anything, it has demonstrated beyond a shadow of doubt, that a system of school support which rests too heavily upon the smallest unit of taxation, is both out of date and manifestly unfair. In Montana the county pays almost all of the high school money. It pays too, a fair amount of the money for graded school instruction. The state, on the other hand pays nothing for high schools except in certain cases of departmental instruction, and a very small share of the graded school apportionment.

What it does pay, is distributed on the basis of a census which includes everybody, from the ages of 6 to 21. Married women are counted if they are but young enough; so are the students of a high school, located in the given district but operated by the county. For instance, District No. 1, of Custer county, collects the apportionment of the students of the Custer county high school, even though the county pays the total cost of their education. It has been pointed out a hundred times that the state support of Montana elementary and secondary education was neither adequate nor equitable.

However, it must not be assumed, because one unit of taxation fails to serve its function, that the situation calls for legislative redress. It is only when another unit has to assume an undue share of the burden that a remedy is demanded. The individual school districts which had to take up the load which the state had to carry found themselves in a very bad way. Not all of them were in this predicament, to be sure.

There have always been districts in Montana which do not declare a special levy but others had to inflict a confiscatory tax upon themselves to keep the school open. There were school boards who cut out every item of needless expense and then had their ten or fifteen

mill levy repudiated by the people of the district at the special elections. Superintendents who had built up a creditable system often had to stand by and watch it collapse under the antiquated scheme of district support.

This picture is perhaps not at all unusual, for parallel circumstances may be recited of many states. Yet it illustrates the difficulties which confront a constructive program of Montana legislation. And as is usual the trouble lies not in the actual correction of the fault but in agreeing on what is best to be done. There has been nothing like unanimity among Montana schoolmen. A state wide income tax has been proposed by some administrators and denounced by others. The county high school system has been attacked and as fervently defended. Representatives from the larger cities have opposed every legislative proposal which would revise the method of apportioning the state money. The remarkable fact is that the joint committee of the state legislature could sift out the varying shades of opinion and arrive at a sensible program.

### Legislative Program Offered

The report of the committee referred to above is one of the outstanding documents of Montana legislative history and to a very marked extent it agrees with the legislative programs of the Montana Teachers' Association. It was written after two weeks of intensive study and in part is as follows:

"Montana requires annually approximately \$12,000,000 to maintain the elementary and high schools on a greatly reduced program such as has been offered the children of the state the past two years. Of that amount more than \$6,500,000 was last year provided by the special levies of school districts, over \$4,000,000 by the counties and less than \$1,000,000 by the state. The committee believes that such a distribution of responsibility is the reverse of what it should be if a uniform, thorough, system of free public schools called for in the constitution is to be provided.

"A study of systems of school finance in other states reveals the fact that there is a decisive movement toward increased responsibility on the part of the state. \* \* \*

"Montana provides only 7 per cent of the required school revenues. Inequalities in tax levies as well as in length of school terms are removed by the policy of larger support from the state and smaller requirements from the local districts in the form of special levies.

"Montana's unequal distribution of the burden of school support forces many districts to greatly overburden themselves by excessive special levies amounting to 40, 50, and 60, mills or more and at the same time other districts may finance their program upon a very low special levy or no special levy at all.

"\* \* \* It is doubtful if sufficient revenues can be provided by the state without a constitutional amendment authorizing an increase in state revenues. A constitutional amendment means a delay of two years while conditions in hundreds of school districts demand immediate relief. Scores of over-age boys and girls in third, fourth, and fifth grades in many rural schools whose school days will soon be past, point to the sacrifices in citizenship of the state occasioned by short terms or no school facilities. \* \* \*

"The distribution of the state income fund from school lands on the census basis is unfair but a constitutional amendment would be required to change it. \* \* \* Other state revenues, \* \* \* however, the oil royalties, the oil license tax, the inheritance tax and the metal mines tax should be distributed by a uniform method and the unfair census basis should be abandoned for the teacher and attendance basis now provided in the inheritance tax law. There is no justice in allotting to city districts large revenues for children whom they are not educating while smaller schools are seriously handicapped by meager allotments.

"Immediate help for needy districts might be provided by the state in the form of poll tax or

a luxury tax. \* \* \* But \* \* \* as a permanent policy, \* \* \* the committee recommends that a constitutional amendment making it possible for the state to furnish one-third or more of the required revenues from a uniform property tax be introduced.

"\* \* \* Large sums of money, approximating a total of \$1,000,000 were diverted over a period of years by the state of Montana from the common school interest and income fund and used by the state. These moneys with interest since 1920 when the practice was stopped should be repaid. The committee recommends that definite action on this matter should not be longer delayed.

"There is a serious question in the minds of the committee as to whether the cost of foreclosure proceedings in connection with farm loans should continue to be paid from the common school interest and income fund. This question should be definitely determined before the practice is allowed to continue further.

"The second unit of taxation is the county. \* \* \* The county levy is not producing as much \* \* \* as this six mill levy did produce a few years ago before valuations were lowered. This decrease \* \* \* has been \$500,000 since 1920.

"Neither is the distribution of this six mill county levy on the census basis just, for \* \* \* reasons mentioned before. Butte, Helena, Great Falls, Missoula, and other larger cities receive apportionment from these funds for large numbers of children attending other schools as well as for those not in any school who are under 21 years of age. The distribution of these funds should be changed to the teacher and attendance basis. \* \* \*

"The third source of revenues and the one which has broken down from the heavy load in recent years is the district special levy. While 99 districts in the state required no special levy last year, 1379 districts were obliged to have levies in excess of 10 mills; 79 schools were unopened because of lack of funds and 336 schools were obliged to maintain shortened terms for the same reason. The unequal distribution of natural resources and centralization of wealth and population are responsible for the contrasting abilities of districts to finance a satisfactory educational program. Only one county at present has the distribution of such wealth equalized within its third class district. (Note. Carbon County has adopted the county unit system.) All children have a chance to attend a nine-month term in that county. Schools enrolling fewer than five children are closed and the children are placed in other schools. The cost of operation was less in 1923-24 than the last year under the district system.

"\* \* \* Certain amendments to the present county unit law are recommended. \* \* \*

"The committee would also call attention to the meager training of many rural teachers and the state's responsibility in making it possible for the rural schools to be served by teachers more adequately prepared for their work. \* \* \* The committee recommends that \* \* \* a part of the courses for prospective teachers (be) the cultivation of thrift, industry, honesty and obedience to laws.

"In conclusion \* \* \* the committee believes that a contented rural population must be acknowledged as vital to the success and prosperity of the towns and cities of the state. Only when the farmer can rear and educate his children in the community in which he resides will there be contentment or permanency in the rural population of Montana."

### State Revenue and Rural Schools

The report is signed by Mr. James Griffin, senate chairman, G. F. Davies, house chairman, Pauline, Buttleman, Hanson, Mesemore.

It is interesting to note that the larger part of the committee's work was devoted to the rural school problem and to the eradication of that outworn system of collecting school revenues by district levies. That problem is larger than Montana for no state has completely solved it to the entire satisfaction of its people. The county unit law of Montana has not been generally adopted as its friends had once hoped. But if the legislative committee's program is carried out there will be more equality in collecting and distributing school moneys than Montana has ever known. In only one aspect do the recommendations enumerated above

(Concluded on Page 70)



## The painter wins his bet!

It happened at Wyndecrest, the charming Dickerson farm residence, outside of Dayton, Ohio. The letter from Mrs. Dickerson reads:

"Each spring it has been necessary to have the French doors and the ceilings of the porch varnished because of their weather-beaten appearance. Last summer we had an old reliable painter do the work and he made a bet with us that he would put a varnish stain on those doors that would remain just as bright and unclouded the year after, as it did when it was just put on.

"He then handed us a can marked Valspar Varnish-Stain, which he put on the doors; then Valspar Varnish for the ceiling. Still I was skeptical.

"The winter has been most severe. Rain and snow have beaten around our house, but the doors and ceiling remain beautifully bright and

unchanged by the weather. No wonder Mr. Painter's eyes twinkled when he made so generous a guarantee, for he bet on a sure thing."

Indoors and out—Valspar provides an exceptionally serviceable finish for floors, walls, woodwork and furniture *at lowest per-year cost*. Hot soapy water, acids, alkalies and strong disinfectants can not harm its smooth, sanitary surface. And underfoot, where "traffic" is heaviest, it shows amazing resistance to wear.

Three forms are available: *Clear Valspar*, *Valspar Varnish-Stain*—which is Valspar combined with transparent colors, and *Valspar-Enamel*—which is Valspar plus the highest grade pigments. Both Valspar Varnish-Stain and Enamel are available in a wide range of beautiful, non-fading colors.

*Anything that's worth varnishing is worth Valsparring!*

**This Coupon is worth 20 to 60 Cents**

VALENTINE'S  
**VALSPAR**  
VARNISH-STAIN

VALENTINE & COMPANY, 460 Fourth Ave., New York

I enclose dealer's name and stamps—20c apiece for each 40c sample can checked at right. (Only one sample each of Clear Valspar, Varnish-Stain and Enamel supplied per person at this special price.)

*Valspar Instruction Book with Color Charts, 15c extra.*

Print full mail address plainly.

Dealer's Name.....

Address.....

Your Name.....

Address..... City.....

**Valspar-Stain** . . . ☐  
Choose 1 Color.....  
**Clear Valspar** . . . ☐  
**Valspar-Enamel** . . . ☐  
Choose 1 Color.....  
**Valspar Book** . . . ☐

Am. S. B. Jnl. 6-35





*All types of Norton Floor are made permanently slip-proof, durable and quiet by the bonded electric furnace abrasive trademarked "Alundum" — long used in the well known Norton Grinding Wheels.*

## NORTON FLOORS

### Alundum Tiles, Treads and Aggregates

#### An Investment in Public Safety

The building superintendent of Filene's of Boston selected Norton Floors—Alundum Aggregate Treads—for the stairways leading to their famous bargain basement for two good reasons: these treads are safe (slip-proof) and they possess exceptional wear-resisting qualities.

The decision in favor of Norton Floors was not made without a trial. Alundum Aggregate Treads were installed on two stairways and the effects noted for a year. Then came orders for the equipping of other stairways to the bargain basement.

The same features—safety and durability—that caused the Filene management to select Norton Floors makes them especially suitable for schools and other buildings where traffic is unusually severe and where public safety must be considered.

**NORTON COMPANY**  
NEW YORK CHICAGO DETROIT



**WORCESTER, MASS.**  
PHILADELPHIA HAMILTON, ONT.

T-140

(Concluded from Page 68)

differ from the program of the state teachers' association. Some of the members of the association, notably president Logan of Hardin, would have preferred an income tax to a general property tax.

Since the breakdown in the district system of school finance Montana has taken great strides in equalizing the tax load. The metal mines tax, a part of which goes to the general state school fund, was proposed by ex-governor Dixon and carried at the polls last fall after a spirited fight. The referendum on the state wide five mill levy will be voted upon at the next general election and to all appearances it will carry without serious opposition. It has been estimated that the metal mines tax, the inheritance tax, the oil tax, and the general state levy will allow the state to furnish from thirty to thirty-five per cent of all school funds.

#### Census Basis vs. Teacher Basis

The outstanding defeat of the committee's report after it was presented to the legislature was the rejection of the proposal to revise the system of apportionment from the census basis to the attendance and teacher basis. This amendment was voted down by the members from the larger cities of the state which profit by the present system.

The rest of their program, however was carried without much of a fight. The franchise in special school elections was broadened to include anyone who is a taxpayer of the district. Formerly only a resident freeholder could vote at such an election. The county high school law was amended making it lawful for the county high school board to allow district high schools to share in all six mills when the maximum levy is made. Formerly, the district high schools shared in five mills only. The legisla-

ture addressed a memorial to congress calling attention to the fact that Indians were being educated at large cost to various schools of the state without any compensating revenue since the Indians are exempt from taxation. The school laws were amended to allow districts and counties to own and maintain dormitories for non-resident children. A committee was appointed to look into the proposed establishment of an eastern Montana state normal. It was also provided that in future apportionments of high school moneys, the money should be apportioned before the county high school could check against it.

Funds to the extent of \$1,905,895.49 taken from the school fund by the state land office will be returned to the state school fund. Senator Griffin's resolution empowers the State Board of Examiners to replace this money from the general fund of the state by issuing refunding certificates of indebtedness or by any other plan or method that may better serve the end sought.

Various minor changes were made in the administration of the county unit law.

Perhaps the greatest single administrative difficulty in maintaining the Montana schools is due to the sparsity of the population and the scattered wealth of the state. Montana is known as the state of magnificent distances. Even with improved roads and better means of transportation there will still be isolated communities where children are few and education expensive. Four years ago—this was immediately after the publication of the Ayers report—the state superintendent reported that around two thousand children of the state were so far from school that they did not attend at all. The legislature cannot revise the topography of the country but it can do away with legislative

discriminations which rob the rural and isolated communities of their chance to help themselves. Judging by the present trend of legislative opinion that equity and fairness which must always be the forerunner of a school system of the first rank will soon place Montana once more at the head of the United States in educational progress.

#### HIGH SCHOOL ADMINISTRATION

—The student body of the high school at Alliance, O., has adopted a constitution providing for the creation of a student council of 41 members and an executive committee of eleven members. The two bodies will govern the school under the direction of the high school principal, Mr. James E. Vaughan.

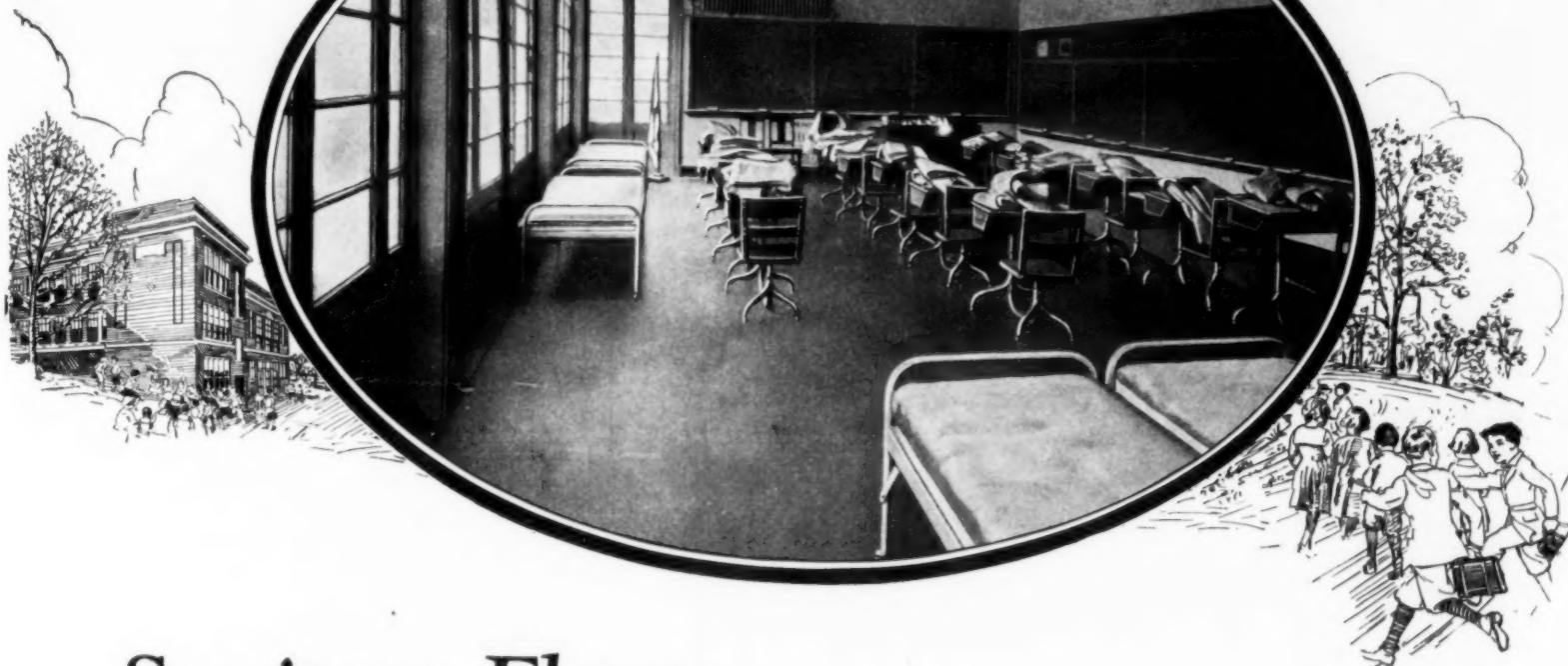
The executive council, which is the executive body of the organization, includes six members of the council assembly. It comprises the presidents of the senior classes, the editor of the high school publication, the president of the Hi-Y and the president of the girls' reserve. The six members have power to hold office, while the other five have power to vote only. A member of the faculty, selected by the principal, acts as counsellor, without power to vote.

The high school principal is given power to approve or veto legislation considered by student groups, and is allowed to decide questions not provided for in the constitution.

The purpose of the organization is to offer opportunities for closer cooperation between students and faculty; to provide opportunity for student self-direction; to foster worthy school activities; to provide for the discussion of questions of interest to the student body.

—Newark, N. J. Beginning next September, high school pupils who, after attending six years, fall behind in their studies, will be excluded from attendance. This is the recommendation of Supt. David B. Corson to the board of education. Dr. Corson brought out that there are pupils in the high school who have been there six, seven and eight years. They have been there twice as long as necessary and are merely wasting their time, in the opinion of Dr. Corson.

Fresh Air Room, 6th Ward Grade School, Ann Arbor, Michigan. Architect: Louis Holmes Boynton. The quiet, restful floor of Gold-Seal Battleship Linoleum is one of several types of sanitary, durable Bonded Floors particularly suitable for schools.



## Sanitary Floors—

Air space, sunlight, comfort—all the factors that make the modern school the most healthful place for children—you consider carefully.

Are you paying enough attention to the floors? More than anything else, the floors of your school should be clean—free from disease-laden germs and dust; easy to keep sanitary.

Floors of Gold-Seal Battleship Linoleum meet this exacting standard, and are comfortable, durable and economical as well.

Such floors are free from cracks and crevices, thus furnishing the highest degree of sanitation. And their noise deadening

qualities quiet the clatter of shuffling feet.

Consider yourself free to talk with our flooring engineers—experts of many years' experience—on any of your floor problems, whether they be problems of durability, design, or cost.

This expert advice is only one side of Bonded Floors service—which includes scientific installation of the finest materials, skilled workmanship and, with every floor installed according to Bonded Floors specifications, a Surety Bond protecting you against repair expense.

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# BONDED FLOORS

*Resilient Floors*  *for Every Need*





High School, Crystal Lake, Illinois. 222 pieces of Beardslee lighting equipment are used in this school building, including 140 Denzars installed in the classrooms, corridors and auditorium.



Music Room in Crystal Lake High School. This room, as well as all other class rooms, is lighted with Denzars.



**DENZAR** THE IDEAL LIGHT FOR SCHOOLS

**S**OONER OR LATER the question of better classroom lighting will engage your serious attention. When you investigate this important subject you will find that one unit—the DENZAR—is very widely used for school lighting.

We shall be happy to send you on request a booklet describing and illustrating the various plain and ornamental types of DENZAR and to assist you in every possible way in selecting the types best suited for your school.

**Beardslee Chandelier Mfg. Co.**

**219 South Jefferson St., Chicago**

## SCHOOL BOARD NEWS

### WHAT WILMINGTON HAS DONE

In July of 1921, Wilmington, Delaware, discarded its large board of education and inaugurated a seven-member body. The new board secured David A. Ward, as superintendent, and then started on a progressive program.

One of the first things done was to abolish all standing committees and act as a committee of the whole. The superintendent was made the executive officer of the board. He was charged with the responsibility of all appointments, transfers and dismissals of employees and with the general supervision of the school system, and is directly responsible to the board of public education. The board adopted an organization plan, with a chart showing the relation of all departments of the school system. The plan provides for the growth and expansion of the schools. It was later modified to include an executive committee.

An organization plan defining the functions of the various activities of the system under three departments: business, education and maintenance, was adopted. According to the organization plan, a business manager was appointed and placed in charge of all the business affairs of the board. All ordering is done through the business office. The office is provided with a bookkeeper and clerks; all financial accounting is done under the direction of the business manager, and he has general supervision of all repairs and janitorial work.

A cost accounting system was installed. A standardization of supplies followed. A research department was organized. Fire and panic hazards were removed from the buildings.

The classroom standards were improved. The minimum requirement in training and experience for appointment in the elementary schools

is a normal school diploma or its equivalent of two years of training above high school graduation, and one year of experience in teaching. For appointment in the high schools, the minimum requirement is a college diploma, or its equivalent of four years of training above high school graduation, and two years of experience in teaching.

A comparison of the per capita expenditure of Wilmington based upon average daily attendance with thirteen other cities of approximately the same size in this section of the country shows that Wilmington's cost of \$86.87 per child for education is the lowest of the group.

These figures are from the reports of the year 1922-1923 and are the latest at hand.

The per capita cost of this group of cities are shown in the following table:

| Name of city | Population 1920 Census | Expenditure per pupil in ave. daily attendance |
|--------------|------------------------|--|
| Bridgeport   | 143,555                | \$117.64                                       |
| Cambridge    | 109,604                | 89.90  |
| Camden       | 116,300                | 134.40   |
| Jersey City  | 297,864                | 213.32   |
| New Bedford  | 121,217                | 124.67   |
| Paterson     | 135,875                | 139.15   |
| Reading      | 107,784                | 120.16   |
| Rochester    | 295,750                | 231.74   |
| Springfield  | 129,563                | 155.64   |
| Trenton      | 119,280                | 167.75   |
| Worcester    | 179,754                | 87.28  |
| Yonkers      | 100,176                | 172.96   |
| Providence   | 237,595                | 108.83   |
| Wilmington   | 110,168                | 86.87  |

For the year 1923-24 the current expenditure per child of Wilmington for public education, not including capital outlay, was \$85.17.

### KUTZTOWN SCHOOL BOARD BUYS INSURANCE

The Kutztown, Pa., school board has resorted to liability insurance in order to guard against the embarrassments that have befallen other school boards in the state.

Some time ago the school board of the city of Easton purchased a tract of land suitable for the erection of a building for school purposes. The place was properly surrounded by a fence, but notwithstanding these precautions ashes and refuse were dumped upon the tract. A boy jumped over the fence and landed in one of these refuse heaps. When he dropped he struck a piece of metal with one of his eyes. As a result of the injury it became necessary to remove the optic.

Then came a suit for damages against the Easton school board and district in the Northampton county courts which resulted in a verdict of \$5,000 against each school director individually. The verdict came about through an old law buried in the statute books, the existence of which had been forgotten.

### AMONG BOARDS OF EDUCATION

—The state legislature of Missouri has killed a bill providing for the election of members of the St. Louis school board by primary instead of by petition.

—Oswego, N. Y. For the first time in the city, the school buildings have been adequately covered with fire insurance. Insurance totaling \$1,008,200 is now carried on the school structures, the buildings being insured at eighty per cent of their appraised valuation.

—Chicago, Ill. The school board has undertaken a revision of the plan of paying engineer-custodians, which has been subject to charges involving "sweat shop" methods and the farming out of labor to women, children, and cheap help. At the present time all janitorial work is done under contract with the engineer-custodians. Their compensation is figured on a square foot basis, and many of them employ women at small wages. The system has created so-called "political plums," with the result that many incumbents of these offices receive larger salaries than principals.

—M. A. Becker, superintendent of Wyoming Park School District of Michigan, has brought suit against Jacob Kroodsma, member of the board, charging him with injury of his good name and with impairment of his earning power. The declaration alleged that Kroodsma made statements that Mr. Becker pocketed funds collected from school children, and that he had appropriated to his own use, money belonging to the school.

—A bill introduced in the California legislature provides that city boards of education shall have power to prescribe uniform dress for students attending junior high, senior high, or junior college classes.

—In an opinion given to State Supt. Minnie Nielson of North Dakota, Assistant Attorney General Rheinhardt holds that the Bismarck board had authority under the law to return to the paid basis of textbooks from the free text-

(Continued on Page 74)



Roosevelt High School  
Dayton, Ohio

## *Window Utility Need Not be Sacrificed for Window Beauty—Nor Beauty for Utility*

There's an old world charm in steel window architecture which words cannot adequately express—an indefinable something that comes through the correct proportioning of slender steel bars and small panes of glass. It's a type of beauty that is well illustrated in the Roosevelt High School, shown here.

Fenestra Steel Windows are equally desirable from the standpoint of utility. In any window opening they give maximum area for light and their easily swinging ventilators supply plenty of fresh air without danger from draft. They are fireproof; easily washed and shaded and last as long as the building.

No wonder, then, that Fenestra windows are becoming standard construction in schools of the better type.

Fenestra engineers in any one of one hundred cities will be glad to show you how conveniently and economically you may use these modern windows. Without obligation on your part, they will help you select the proper types and sizes; quote you prices; and supply details and drawings. Then when your order is placed, Fenestra service assures prompt shipment and satisfactory installation by our erecting department, the Fenestra Construction Company.

May we send you our "Blue Book of Steel Windows?" Free on request to "those who are interested in school construction."

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# *Fenestra*

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homes and apartments  
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# Cleanliness Starts with CLEAN FLOORS



School buildings should set an example for all other buildings in their cleanliness and orderliness. That this is recognized is shown by the constant improvement in design so as to insure modern sanitation. No matter how elaborate it may be, no system of cleanliness is truly efficient unless it includes a way of getting and keeping floors clean.

It takes FINNELL Electric Scrubbing to get CLEAN FLOORS economically. Richmond Board of Education is one of the many boards that have proved this. Starting with one mop truck early in 1923 the board has since purchased two scrubbers,—a large one for the corridors and large areas and a smaller one for the class rooms and smaller spaces.

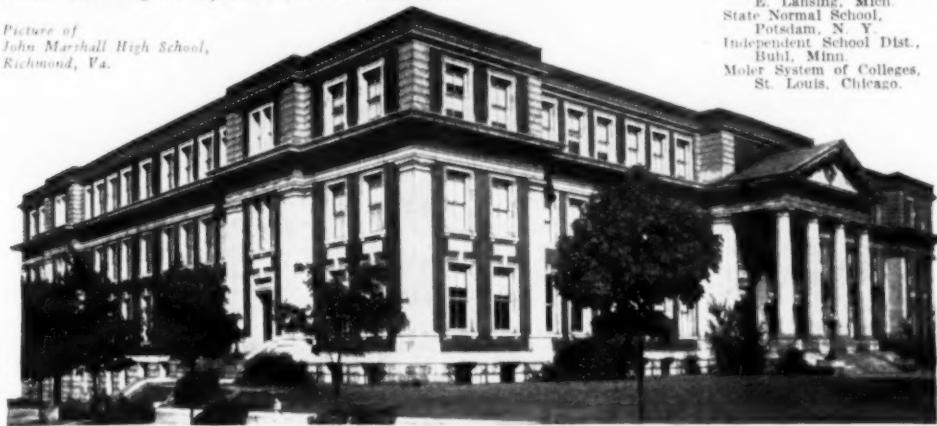
The FINNELL SYSTEM is the most economical method known today for maintaining CLEAN FLOORS.

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*Power Scrubbing Headquarters for Nineteen Years*

*Picture of  
John Marshall High School,  
Richmond, Va.*



## Some of Schools Using Finnell System

University of Tennessee,  
Knoxville, Tenn.  
Harvard University,  
Cambridge, Mass.  
University of Nebraska,  
Lincoln, Nebr.  
Board of Education,  
Baltimore, Md.  
University of Minnesota,  
Minneapolis, Minn.  
University of N. C.,  
Chapel Hill, N. C.  
St. John's Mill Academy,  
Nashotah, Wis.  
Board of Education,  
Lincoln, Nebr.  
Board of Education,  
Richmond, Va.  
Board of Education,  
Middletown, Ohio.  
Board of Education,  
Elizabeth, N. J.  
Board of Education,  
Fort Worth, Texas.  
Cornell University,  
Ithaca, N. Y.  
Board of Education,  
Buffalo, N. Y.  
Board of Education,  
Pawtucket, R. I.  
Board of Education,  
Danville, Ill.  
Board of Education,  
Oakland, Calif.  
Mt. Clemens Board of Education,  
Mt. Clemens, Mich.  
University of Kentucky,  
Lexington, Ky.  
Michigan Agricultural College,  
E. Lansing, Mich.  
State Normal School,  
Potsdam, N. Y.  
Independent School Dist.,  
Buhl, Minn.  
Moler System of Colleges,  
St. Louis, Chicago.

(Continued from Page 72)

book policy in existence for a number of years.

—The school board of Quincy, Ill., has refused to permit card-playing in school buildings. The refusal came following advice from the state department.

—A bill has been passed in the Indiana legislature, providing for a board of five members for Evansville, two of whom shall be women. The members will be appointed by the mayor, two to serve for one year, two for two years, and two for three years. New members may be appointed in June.

—Chicago, Ill. An appropriation of \$1,500,000 as the initial fund for the establishment of an administration building for the board of education, has been included in the 1925 budget. School officials recommend that new main office headquarters be provided, bringing all heads of the various divisions together under one roof, and resulting in a saving of money and inconvenience.

—San Bernardino, Calif. An election has been called to amend the city charter providing for an increase in membership of the board of education.

—Kenosha, Wis. A committee has been appointed to make a study of the feasibility of a movement for reducing the present school board membership. The committee is composed of ten members and is headed by George S. Wyte.

—Brooklyn, N. Y. Malicious mischief on the part of boys in the Vanderveer Park section of Flatbush has caused the school officials to take extra precautions against damage to school property. Boys having no connection with organized school activities broke into the school building and cut desks, stole electric lights and switches, and did other damage.

—The school board of McKeesport, Pa., has refused to permit dancing in the high school gymnasium. A committee of this year's senior class had asked the use of the room for its future social affairs.

—A member of the city council of Providence, R. I., may not accept membership in the school board, and at the same time retain office in the former body, according to City Solicitor E. S. Chace. The solicitor ruled that a member of the city council, elected to the school board and qualified for the latter office, need not resign

from the former, since acceptance of membership in the committee in itself vacates his seat in the council.

—Erie, Pa. The school board has adopted a rule providing for the elimination of fraternities. The rule requires that principals and teachers in high schools shall deny to all secret societies, all public recognition, including the privilege of meeting in the school building. They are further to deny to any member of a fraternity, sorority or other secret society, the privilege of taking part in any school contest or school program, or of membership on any team or club representing the school.

—County Auditor Arthur J. Thatcher of Franklin County, Ohio, has ruled that no school district in the county may take advantage of the law granting financial assistance to school districts. The auditor declares that no district may take advantage of the law for the reason that no district has been deprived of sufficient money during the year 1924-1925, and that in most cases, such money allowed by the commission is greater than the cost of operation for the year.

—The school authorities of Dayton, O., have taken action toward the elimination of petty thievery. Books, money, and wearing apparel have been among the articles purloined. It is believed a large part of the trouble is due to persons going into school buildings.

—The Griswold bill providing for the establishment of county school boards of five members has been passed by the Pennsylvania Senate. The boards are to be elected by the county association of school directors, and they will act in an advisory capacity.

—Attorney General B. J. Gibson of Iowa, in an opinion given to State Supt. May Francis, holds that school children of the state may earn money by selling various articles, and that the school board may not take the money from them, or divert it to any other use than that which the pupils approve.

—Manitowoc, Wis. Use of the Lincoln high school auditorium for political or religious meetings will not be permitted under a resolution adopted by the board of education. A rental fee of \$50 will be charged to cover the cost of lighting, heating, and janitor service.

—The members of the school board of West

Mahanoy Township, Pennsylvania, have been removed by the court on charges of violation of the school code. In the findings set forth in the court decision, thirteen violations of the state law were charged against them. The removal carries a provision that the members may not again serve on the board within five years.

—Grand Rapids, Mich. A new policy for the payment of contractors engaged in work on school buildings has been inaugurated by the school board. Under the new plan, payment up to 90 per cent will be made as work is completed. Payment will also be made for acceptable materials delivered on the site. In the past, contractors have been paid from time to time up to 85 per cent of the cost of the building as parts were completed, and nothing was allowed for materials. It is believed the new plan will result in more numerous and more advantageous bidding.

—Waltham, Mass. The school board has created two new positions of elementary supervisor of school buildings and supervising janitor, with salaries of \$2,750 and \$1,800 respectively.

—Creation of county boards of education throughout the state, as well as appointment of county school commissioners by the supervisors, is proposed in a bill introduced in the Michigan legislature. The purpose of the county-board plan is to harmonize work in the county schools in the direction of courses of study and other phases of the work.

—Boards of education in Ohio may charge for janitor service when they permit the use of school buildings for entertainments or other public meetings, under a bill approved by the House of the state legislature.

—Ottumwa, Ia. Beginning next year, spring vacations will be eliminated, and summer vacations will begin two weeks earlier.

—A member of the Racine, Wis., board of education in a public address charged that Superintendent F. M. Longanecker was partial to an architect's firm. In an address before the board, Mr. Longanecker said the charge was untrue and added: "For the last two or three years I have been the victim of misrepresentation, suspicion, and malicious gossip. Stories reflecting upon my character and integrity, and

(Continued on Page 77)

# MARBLELOID

The Universal FLOORING  
for Modern Schools



## Makes Worn-Out School Floors — *New*

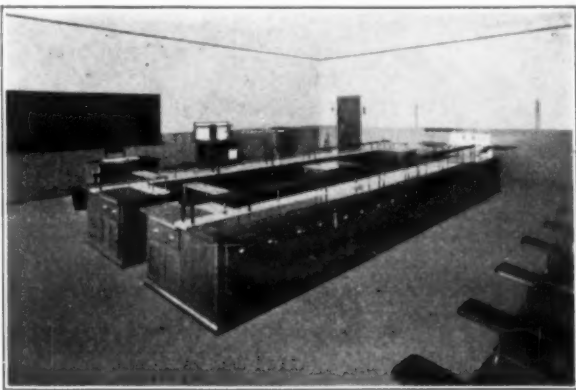
One of the qualities of Marbleloid *permanent* Flooring is that it is a material ideally adapted for re-surfacing old worn-out wood and concrete school floors.

This composition flooring is laid plastic over the old floor and in a few hours sets into a strong, warm, smooth-surfaced, modern floor which adds much to the appearance, serviceability and permanence of your school building. This Marbleloid Floor will not dust or chip, will be found certain and elastic for walking and will not require any expensive upkeep. It will permanently hold its color and attractiveness and

can be easily cleaned by flushing with water—qualities to be desired in school floors.

We install each Marbleloid Floor as well as manufacture the material and we will *guarantee* it to please you in attractiveness, longevity, warmth, strength, and in all other qualities we claim for it.

If you have a worn floor in your building let our engineers tell you the cost of transforming it into a modern, fireproof and durable Marbleloid Floor—or if you are erecting a new building be sure to investigate the suitability of Marbleloid for its floors.



Write for samples and our 32 page floor book.

**THE MARBLELOID COMPANY, 465 Eighth Avenue., New York**





## 476 Miessners in New York Schools — setting new standards in school music

Music Week—May 3 to May 9. In connection with this event, it is interesting to review the great progress which is being made in school music. And it is only natural that we should point with pride to the important part the Little Miessner Piano has played in the promotion of Class Piano Instruction.

More and more schools are adopting Class Piano Instruction and the Miessner. Thousands of Miessner Pianos now serve the schools of America. In New York State alone 476 Miessners are used for promoting school music. The compact Miessner is the ideal school piano. Small, light, low. The teacher is able to see over the top and direct the class as she plays. The Miessner is easily moved by two boys from room to room. Its full, big, mellow tone equals that of a small grand piano.

Why not set a new standard of music education for your school and give every child the advantages of Class Piano Instruction the popular Melody Way, as outlined by W. Otto Miessner and now so widely used and endorsed? Mail the coupon today for complete information.

MIESSNER PIANO COMPANY  
118 Reed Street, Milwaukee, Wis.

# MIESSNER

THE LITTLE PIANO WITH THE BIG TONE

### Still time to get your Miessner for COMMENCEMENT WEEK

Why not get your Miessner in time for the Commencement Program? Then you will have it ready for the opening of the Fall term. There is still time before Commencement if you act now. We are giving Commencement orders the right-of-way over all others.

#### MAIL THIS COUPON TO

Miessner Piano Co.,  
118 Reed Street,  
Milwaukee, Wis.

☐ Check here for Miessner Piano Catalog, special low price to schools and details of 10-day free trial plan.

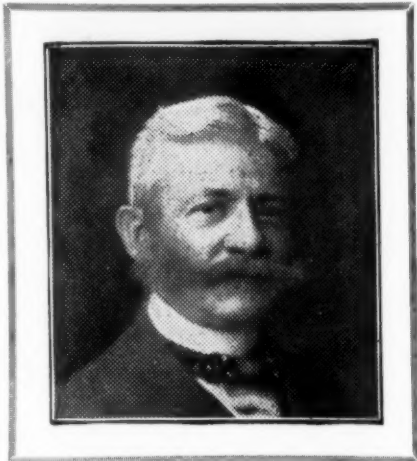
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MILES C. HOLDEN, President

SPRINGFIELD, MASSACHUSETTS

(Continued from Page 74)

upon my professional ability have been peddled about with the object in view of breaking down the confidence of the public in the administration of their schools. Up to the present time I have borne these outrages in silence, but since this silence has been misconstrued by some, I feel the time has come when I can remain silent no longer. The interests of the public schools demand that persons responsible for mischief of the sort described above shall be held to a strict account for their statements, and in the future persons making unwarranted statements will be called upon to furnish evidence of the truth of such statements or retract them."

—The district court at Girard, Kansas, has been petitioned to oust Dr. J. G. Sandidge, Lafe Wethers, Charles Ecker, and John Yeokum, as members of the Mulberry school board. Inefficiency and favoritism are charged.

—Deadwood, S. D. One hundred and eighty students of the high school, who went on strike against a board of education action in refusing to retain Principal A. E. Hollister, have returned to school. The strikers forfeited the customary spring vacation and will be obliged to make up time lost in the strike. The board has employed M. D. White of DeSmet to succeed Hollister next year.

—Madison, Wis. The board of education will be short \$7,800 of its original request of \$907,000 despite the \$32,000 slash of funds by the city council. The deficit will be made up through added revenues of the board, and through savings made in lower salaries for new teachers and fewer teachers employed. Summer vacation work conducted for the past two years will be eliminated this year, with a saving of about \$5,000.

—Joplin, Mo. The school board has asked for an additional school tax of twenty cents on each \$100 of valuation in order to produce a building and repair fund. The additional tax is very necessary at the present time in order that sufficient money will be on hand for the incidental fund.

—The school board of Ashland, Pa., has made a study of the tax problem to determine on a remedy for its present predicament. A decision of the court lowering the valuation of the borough from \$11,000,000 to about \$3,000,000 will

result in a deficit of \$50,000 at the close of the year. The board had levied the millage of eight mills for the present year on a valuation of \$11,000,000, which has been reduced more than a third. Next year it will be necessary to make up the deficit and in addition, to provide for a running expense of \$90,000.

—Twin Falls, Ida. In order to meet the demands of an anticipated increase in population and maintain the schools next year, it will be necessary to provide approximately \$58,000 more than will be available from all sources, unless the voters authorize an additional tax levy at this time. An increase in estimated expenses for the year are shown in the sum of \$15,000 for salaries of additional teachers, and \$2,100 on account of fixed charges for the payment of insurance premiums falling due next year.

—Detroit, Mich. Mayor John Smith in reviewing the city budget, has cut \$1,000,000 from the estimates of the school board for the construction of new schools. It was brought out that new schools could be erected at a cost of 36 cents per cubic foot, or a reduction of nine cents per cubic foot. The estimate for elementary, intermediate and high schools has now been reduced from \$5,750,766 to \$4,750,766 for the next year.

—The North Dakota Supreme court has denied a motion for a rehearing in the case of A. D. Weeks, R. P. Freeman, the Fargo school board and the city of Fargo, against Charles Hetland and the North Fargo board. The decision of the court automatically places the funds of the village board in the hands of a committee on arbitration, composed of one representative of the Fargo board, one representative of the village board, and Miss Caroline Evingson, county superintendent of schools. The disposition of the funds will include the turning over of about \$10,000 to the Fargo school board.

—Mr. Edwin Hebden, statistician of the Bureau of Research for the public schools of Baltimore, Md., has prepared a study entitled "Per Capita Cost of Educating Pupils in Baltimore," in which he shows what it costs to educate each pupil in the several types of schools.

In the elementary grades and kindergartens with an enrollment of 78,136 children, the cost

per child for general control for 1923-1924 was \$1.613; for instructional purposes it was \$48.507; for operation of plant, \$5.774; for maintenance of plant, \$2.481; for auxiliary agencies, \$3.133, and for fixed charges, \$.865, making a total for operating expenses of \$62.373, and a capital outlay, \$13.095, or a total for all expenditures of \$75.468.

In the high schools, with an enrollment of 9,309, the cost for general control was \$1.613; for instructional purposes it was \$94.492; for operation of plant, \$8.944; for maintenance of plant, \$5.553; for auxiliary agencies, \$0.878, and for fixed charges, \$1.145, making the total for operating expenses \$112.625, and the total for capital outlay \$22.530, or a total for all expenditures of \$135.155.

For purposes of comparison, figures have been compiled showing that children in Baltimore are being educated at a cost of two-thirds or less of what it costs to educate children in Cleveland, and for about three-fourths of the cost in Detroit.

—New Britain, Conn. A bond issue of approximately \$900,000 has been asked by the school officials for the completion of the East End school, the purchase of a site and the erection of a building for the Monroe school, and the construction of a building for the Lincoln district.

—Middletown, O. The board of education will take advantage of provisions of the Taft-Williams law in a petition to obtain by taxation the \$40,000 deficit with which the schools are confronted. It is estimated the extra levy will not be more than eight-tenths of a mill.

—The Superior Court at Putnam, Conn., has decided in favor of the defendants in the case of Edward Keegan against the town of Thompson. Suit had been brought by the plaintiff to enjoin the town from paying members of the school committee and to recover damages from members for pay received in past years. The Court held that towns have power to pay individuals on the school board where sufficient vote has been taken and where the board of selectmen have been fully informed.



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## Fulfil Every School Room Requirement



This window shade installation is the simplest and most satisfactory method of controlling light and ventilation conditions in a schoolroom. Nothing to get out of order. No disfiguring adjusters. No needless expense.

**Considerations** In schools the selection of window shades assumes greatest importance. The chief considerations are—durability and economy—appearance—minimization of eye strain—sanitariness—ventilation.

**Endurance—Economy** The close woven, unfilled fabric of **Luxor** cloth supplies the unusual strength and wear-resistance needed to withstand the careless, rough handling by children. Its enduring qualities represent the greatest economy. Even after long use **Luxor** retains its shape and pleasing appearance. It will not become unsightly and misshapen as happens soon with unsized and unstretched materials.

**No Eye Strain—Best Colors** With **Luxor** shades the glare of the sun is replaced by a cheerful diffused light, restful to the eyes, and sufficient for usual school room activities. Neutral colors such as Slate, Linnette, Pongee, and Maize are best for schools, being most agreeable to the eyes.

**Sanitariness—Washability** The unsanitary features of so-called canvas or other coarse-fabric materials which catch and hold dust and germs are missing in **Luxor**, whose finely-woven, hard-finished surface offers no lodgment for particles of foreign matter. The surface of **Luxor** cloth may be cleaned by using a damp cloth, with soap if necessary. Finger marks and soil spots may be removed simply by the use of art gum.

**Ventilation and Light Control** Proper ventilation of a school room is of vital consequence. By installing two shades to each window at the center, any combination of air and light both at the top and bottom of the windows may be secured. This arrangement will also save the shades from flapping or sucking in the breeze, thereby eliminating disconcerting noises and harm to the fabric. Adjusters are a needless expenditure. They detract from the appearance of the windows and easily get out of order.

**Caution** The injudicious selection of shade fabrics and shade rollers which are hardly beyond the experimental stage, new and untried, has brought expensive results in a number of cases. For school work, shade satisfaction is wanted not only in the beginning but for years to come. Wisdom lies in choosing **Luxor** cloth and **Standard** rollers, back of which stand the experience and integrity of one of the largest and oldest manufacturers of such goods. These products have proven their merit over a long period of time and in thousands of the country's finest buildings.

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**Standard** guaranteed rollers are of the highest quality throughout, and because of their sturdy construction are especially fitted to the rigorous school conditions. They are fully guaranteed by us for a period of twenty-five years.

The New Evanston High School, Evanston, Ill., is one of the finest examples of modern school architecture.



It is shaded with **Luxor** shade cloth and **Standard** shade rollers.

—The Chicago board of education band recently gave a concert at one of the public school auditoriums. The program, which included both classic and popular music, was preceded by an address delivered by William Hedges, district superintendent of schools. John H. Bararach, instructor of music of the Carter H. Harrison technical high school is the conductor of the band.

—After numerous complaints came to the school authorities of New York City, regarding fraternity activities, President George J. Ryan of the board of education said: "The board of education cannot tolerate the action of students in defiance of the regulations prohibiting fraternity membership, nor can it countenance activities even outside of the school that bring into disrepute the high schools they attend." Superintendent William J. O'Shea added: "It is not enough that the board of education adopt regulations. It is important that we bring to the attention of parents the conditions that have been revealed and enlist their cooperation. It is important to bear in mind that the vast majority of students are not involved and also that in some of our high schools student councils have adopted regulations to insure high standards of dress and conduct among the student body." It is now proposed on the part of the board of education to put "teeth" into the regulation regarding fraternities.

—The school board of Lima, O., has begun an investigation of school buildings lacking the proper means of fire protection. Steps have been taken to insure that each building is properly equipped with fire extinguishers and good fire hose. The equipment is to be installed in both portables and permanent buildings.

—The Teachers' Union Auxiliary of New York City, in a report to the board of education, charges that the schools under the contract system of janitorial service, are "dirty and neglected." The organization presented a plan for reorganizing the janitorial system to include all school buildings in one system, under the direct control of the Bureau of Plant Operation of the department of education. In connection with the proposed plan, it is suggested that a minimum wage for all janitorial workers

be established; that wages be paid from a central source as are teachers' salaries; that the number of helpers be made proportionate to the size of the plant; that better hours and shorter shifts be established; that there be more frequent inspection from headquarters, and that there be a larger budget for custodians.

The recommendations of the auxiliary are based upon an extensive survey begun in 1923, which included a study of janitorial systems in 26 other cities, inquiries addressed to 400 teachers, and personal visits to sixteen school buildings in the greater city.

—A member of the Tacoma, Washington, board of education created a sensation by writing letters to the press attacking the building program adopted by that body. It was then discovered that the objecting member had attended one meeting out of ten. Thereupon the editor of the Tacoma Ledger said: "Election to a school board is not intended to gratify the vanity of an individual and when the people vote for a candidate for such a position they do not do so because he is a popular fellow whom the electorate desires to honor. Election to such an office means, or should mean, that the person placed in such a position not only is devoted to the cause of education but that he is willing to give of his time and efforts to advance the educational interests of his community."

—A contract has been awarded for the erection of a new school in Smith Township, Mahoning County, near Alliance, O., to cost \$20,000. Construction work has been begun promptly in order that the building may be completed during the present summer.

—Sacramento, Calif. The school department has an administration building wherein are centered all activities of the department. There are here the offices of the supervisors, of the school physicians and nurses, and of the attendance department. The parent-teachers' Association has its offices in the building, and there is a suite of rooms for the superintendent and his force, and for the business manager and his force. The commissioners of education have their rooms in which they meet, and there is a storeroom for supplies and books.

—The board of education of Idaho does not

regard the state superintendent of instruction, who is elected by popular vote, as its executive officer. It voices its protest by saying that the chief executive officer of the board should be selected with at least as great care as is exercised in the selection of a city superintendent of schools.

"Public education has become the open field for the various and varying broods and swarms of expert surveyors, and investigators are hatched in the incubators of some of our higher institutions of learning. Heaven knows our system of public instruction needs and should have the corrective, directive help of every honest, earnest, competent person who seeks to render such service." So spoke Francis G. Blair, state superintendent of Illinois recently. "If they are to be kept in a state of flux and flow, of quick adjustment to changing needs, in a constant process of becoming, they must feel and respond to the eruptive, reformative forces of constructive criticism. Every open minded, forward looking school official or teacher accepts and acts upon this principle. But no degree of open minded hospitality should restrain such officers and teachers from criticising those critics who for want of time or ability have made only a superficial, fragmentary study of the field involved in the survey or who show prejudice or design in their conclusions and recommendations."

—In response to the question as to Georgia's greatest educational needs, Superintendent G. G. Bond of Athens, urges "better trained teachers, the county unit and high grade superintendents." Superintendent C. B. Gibson of Savannah, also recommends a larger supply of well trained teachers. "More money is needed," he says, "but more education for the dollars spent is the greatest need."

"Until every superintendent sees that the social and political motive is stronger than the scholarly and cultural, the scandal of the neglect of their political duties by the educated will continue," recently said William McAndrew, superintendent of the Chicago schools. "If the founders of the American public school system should come back to earth and survey the schools they would wonder whether the superintendents today are aware that there was a revolution in 1776 and what its purpose was."



From left to right—International Program and Clock Distributor Cabinet (highest grade electrically driven program and clock control apparatus obtainable); Three types of International Secondary Clocks, Round Metal Case—Square Wood Case—Round Wood Case; and Type "D" Master Clock.

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—Superintendent of Schools, Gadsden, Ala.

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That is why the comment above has interest for every school official, architect and builder confronted with the necessity of choosing an electric time system for a school building.

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Discriminating investigators *who seek only the best* in electric time systems can profit by the experience of hundreds of schools which have found, as they found in Gadsden, that of all possible electric time systems, INTERNATIONAL is the most satisfactory.

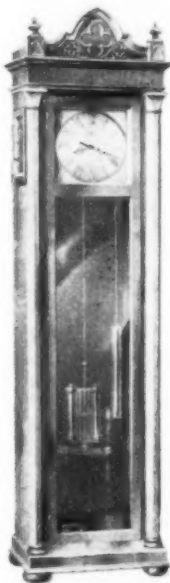
Every school needs an automatically operated electric time system that runs its programs of opening

and closing hours, class periods, and the other set events of the day, week or month on absolute, dependable schedule time.

We recommend a program system controlled by an INTERNATIONAL master clock, that is wound by electricity and guaranteed not to vary in excess of ten seconds a month. We recommend INTERNATIONAL secondary clocks, bells and all the other necessary appurtenances of such a system.

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## SCHOOL BUILDING NEWS

—The first unit of a twenty-room school was begun on January first at Bellingham, Wash. The building is to be completed in time for the opening of school in September.

—The school board of Minneapolis, Minn., has awarded contracts for the construction of additions to the Hay and Hamilton schools. The former will cost \$86,361, and the latter \$136,268. The cost will be 32.77 cents and 35.24 cents per cubic foot, respectively.

—Boston, Mass. By a vote of three to two, the school board has approved a substitute bill now before the state legislature, involving the raising of \$17,000,000 over a period of the next five years for the erection of new school buildings in the city. Under the original bill, provision was made for an appropriation of \$12,000,000, \$1,000,000 to be appropriated in 1925, 1926, and 1927 respectively.

Under the substitute bill, the total appropriation is to be divided as follows: \$2,000,000 in 1925; \$3,000,000 in 1926, and \$4,000,000 each in 1927, 1928, and 1929. It provides \$5,000,000 in excess of that requested by the schools, and further provides that the amount appropriated each year shall be actually levied.

—Joplin, Mo. The school district faces a crisis, and either a special bond issue or an increased assessment must be made to meet the situation, accordingly to President A. B. Clark of the board. A proposed twenty-cent increase in the tax levy for a building and repair fund was abandoned on the advice of the board's attorney. It has been decided to await the result of a bond issue election, which is to vote bonds for a building program as provided for in a recent survey report. It is expected the \$45,000 in the incidental fund will tide the schools over during 1925.

—Springfield, Mo. A levy of \$1.05 for general school purposes has been agreed upon by the school board for the next year. This does not include the levies to be fixed by the county clerk for bond interest, and for a sinking fund to retire the school bonds.

—Denver, Colo. A school extension program involving the probable expenditure of \$7,925,000 during the next five years, has been proposed by the board of education. The tentative program, which is subject to revision, calls for \$1,145,000 worth of building sites; \$5,130,000 in new buildings; \$350,000 in new equipment, and an emergency fund of \$1,800,000.

The new program is in addition to and separate from the \$2,400,000 bond issue to go before the voters at the coming election, with which to complete schools now under way.

—New York, N. Y. Recent tendencies have indicated that the school board has checked its huge school building program until the extent of the relief afforded by new schools opened in the fall, is ascertained.

In the direction of a reduced program there is apparent a steady falling off in the number of new schools put under contract as compared with a year ago. The board of estimate has allowed the board of education only \$1,500,000 of the \$15,000,000 requested some months ago. The program for the year 1925 was set at \$32,700,000, while the 1926 program will be limited to \$18,000,000.

—A building program amounting to \$472,799 has been tentatively adopted by the Akron, Ohio, Board of Education for 1925. Garfield high school, a new building to be erected to care for the large number of high school students is to be built in two sections, according to present plans. The first section, to be erected this year, will cost about \$315,000. In addition to this, school officials are planning a \$25,510 annex to West high school; a \$75,454 annex for South high; a \$63,311 annex for the Stoer avenue grade school and a \$3,524 annex to the Forest Hill school. Plans for the additions are being drawn at the present time and will be considered by the school board about May 1.

—Rochester, Pa. The Jefferson Street School, closed in June last for remodeling purposes, was occupied for the first time on March 9th. In

order that parents might obtain a better idea of the school work, a short session was held at the school in the evening, and the regular program carried out.

—An extensive program of repairs for the school plant at Mobridge, S. D., will be undertaken during the present summer.

—Supt. F. W. Robinson and school board members of Williamsport, N. Y., recently visited the new school buildings at Elmira, N. Y. Supt. L. E. DeLaney, of Sayre, Pa., together with members of his school board, made a similar visit at Elmira.

—The seating shortage in the Chicago schools is increasing rather than diminishing. At the opening of the present school year, about 77,000 children were without satisfactory accommodation. By next September, it is estimated, the seat shortage will affect at least 80,000 pupils. The Daily News says: "The board needs a building plan covering a term of years, and that plan cannot be evolved without due consideration of the future of the platoon school and similar constructive reforms."

—The southeast junior high school at South Bend, Ind., was formally dedicated on March 25th, Dr. E. C. Elliott of Purdue University, delivering the principal address. The new building has been occupied since January and accommodates more than 1,200 students.

The structure is three stories in height, has 32 regular classrooms, gymnasium, auditorium, library, and cafeteria and cost \$600,000. It was designed by Architects Austin & Shambleau and erected under the direction of the H. G. Christman Company.

—The Omaha, Nebr., board of education has finally worked out its school building program. The World-Herald says: "It looked for a time as though the old adage might be paraphrased to read 'too many architects spoil a building program.' However, a peace treaty has been signed under which a group of architects assume the responsibility for seeing that the city gets good schools, honestly built. It is now up to them to make good on the policy which the board has adopted."

—The city of Washington, D. C., now has a five year school building program with an appropriation amounting to \$19,000,000.

(Continued on Page 82)

# LYON STEEL LOCKERS



## Doubling the Locker Capacity

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This installation shows the faith that those who know Lyon Steel Lockers have in their permanency and enduring good appearance.

The strong frames of Lyon Steel Lockers hold them in rigid alignment. The doors do not sag and jam. The finish is lasting even with schoolboy use.

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Plastering on Metal Lath is crackproof. A permanent bond is formed between metal lath and plaster. Such ceilings and walls won't loosen and drop off. Then too, they are firesafe—another exceedingly important reason why you should insist on having every room in your schools remade with Metal Lath if it is not already in the walls and ceilings.

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When ceilings fall in school-rooms, it is really a miracle if no one gets hurt because, when seated, practically every part of the room is occupied. Falling ceilings in any building are dangerous, but especially is this true in school-rooms. Don't tolerate this risk in your schools.

**M**ILCOR Invisible Joint Metal Ceilings and Walls are used extensively in Schools—especially in the smaller schools and in rural districts.

These ceilings are positively safe—they cannot crack or fall off—they retard fire remarkably—they are inexpensive and very easy to erect—they can be fastened directly over the old ceiling or wall and for that reason are very practical for remodeling work—they are not affected by changes of temperature or by excessive moisture—they are sanitary and easily cleaned or repainted.

A wide variety of artistic designs and combinations especially adapted to school-rooms are available. Investigate them if your school needs remodeling, or if you are planning a new building.

Send for Free Booklet on  
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**MILCOR**  
ART METAL CEILINGS

(Continued from Page 80)

—Standards of safety for school buildings have been laid down by the Department of Fire Prevention of Kentucky, in its standards issued for the year 1925.

Under the rules, officials and teachers of public, private, and parochial schools are required to hold fire drills once a month and to see that all doors and exits open outward and are kept unlocked during school hours. A fire gong must be installed in each building, the gong to be used for no purpose other than for fire drills or in case of fire. All schools should have ample exits and fire escapes where the building is more than two stories high.

—Galesburg, Ill. The school board has adopted a policy allowing the use of school gymnasiums for public gatherings, in accordance with rules laid down. A list of societies eligible for the use of the gymnasiums has been compiled.

—Omaha, Neb. The school board has named Mr. Harry Lawrie as architect-in-chief of the grade school building program. The board also contracted with Architects N. R. Bingham, F. A. Henninger, F. S. Scott, T. R. Kimball, Clarke & Clarke, McDonald & McDonald, and C. W. Steinbaugh to undertake the preparation of plans for the buildings to be erected. The agreement provides that the work shall be done for a fee of three and one-half per cent of the cost of the grade schools, and five per cent of the high school, including all expenses save the charges for clerks of the works.

—Red Fork, Okla. Construction work on the new high school has been begun. The building will be two stories high and will cost \$100,000.

—Springfield, Mass. The school board has decided not to ask for money for a new school at East Forest Park. For the present it will be necessary to concentrate on the three buildings now in process of erection.

—Indianapolis, Ind. The school board has reached a solution of the problem of financing a \$410,000 elementary school program, for which only \$371,000 is available. It is planned to borrow the necessary money from the bond funds of the school city and to repay this money after the first of the fiscal year. Plans will be prepared immediately for one new building to

cost \$170,000 and four additions to present structures, permitting the beginning of construction work immediately after school closes.

—Fort Wayne, Ind. The school board has completed a study of the school plant, showing that an expenditure of \$1,375,000 for buildings and equipment will be necessary to bring the entire plant up to standard. It is planned to erect four grade buildings, an administration building, and additions to four buildings.

—Washington, D. C. A study of schoolhouse construction is to be made by a committee of school and municipal authorities before the launching of the \$19,000,000 building program. The committee will visit Baltimore, Cleveland, Detroit, Chicago, and other cities, making a study of types of schools as well as comparative analyses of construction in the various cities. The findings of the committee will form the basis of a comprehensive report to be prepared by Ernest Greenwood, vice-president of the board of education and chairman of the inspection committee.

—Seattle, Wash. The construction of eight new schools, authorized by the voters in March, will be begun immediately. The eight structures are to be constructed with the \$2,500,000 voted by citizens. It will provide for a total student capacity of 5,840 and will be entirely completed in two years.

—Spring City, Pa. The school board of Charlestown Township has received a gift of \$20,000 from one donor, and several smaller gifts from other friends of the schools, enabling the board to award a contract for a \$38,000 consolidated school. In addition to gifts of money, the board also received a donation of four acres of land as a site for the building. The new building will have four rooms and will be completed in time for the fall opening of schools. This is the first instance in the country where the community has been able to find a school building with very little cost to the taxpayers, and the entire credit is given to those public-spirited citizens who have made the erection of the school possible.

—Indianapolis, Ind. A program of new construction in school buildings, including one new building and four additions, at a cost of \$410,000, and an expenditure of not to exceed \$250,

000 in repairs and replacement has been adopted by the school board for the coming summer.

The program for new construction was previously recommended by the building and grounds committee and represents the most urgent needs in the way of new construction.

—The beginning of construction work on the Jamaica high school, in Queens Borough, New York City, is said to be the first step in high school relief. The new building covers a large area, providing accommodations for 3,200 students, and is limited to three stories in height. A site has been purchased and plans are in process of completion for another high school in Far Rockaway.

—Architect William B. Ittner, of St. Louis, Mo., has been retained by the school board of Dayton, O., for consulting service in connection with the additions to three elementary schools. Mr. Ittner is to receive a stipulated fee, in accordance with a prearranged plan.

—Supervising Architect Edgar L. Martin of the Chicago board of education has revised plans for new schools to overcome objections raised by the building commissioner's office. It is expected that construction work on three schools will be begun in the near future.

—In a recent decision, the Milwaukee County Circuit Court upheld the mandate of the voters of Cudahy, Wis., in favoring the Carpenter school site. In a controversy, the citizens became divided over the selection of a site, the one faction insisting that the Carpenter site be retained, the other faction supporting the school board in the selection of the Attermeyer site. The former site was the more valuable and was deemed in every way the most desirable.

—Jacob H. Hilken, superintendent of buildings and grounds for the Indianapolis schools, has presented a report showing the maintenance needs of the schools, the needs for repairs, remodeling and improvements to buildings. The report reveals that many of the schools were built from thirty to forty years ago, and that alterations and repairs are constantly required to keep them in good condition and adapted to modern uses. Some of the needs outlined in the report are as follows:

Proper classroom natural lighting.  
Proper classroom artificial lighting.

(Concluded on Page 84)

# FLOORING

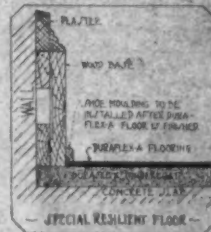


Chas. E. Gorton High School, Yonkers, N. Y.

G. HOWARD CHAMBERLIN, Architect

OTO. T. KELLY CONSTRUCTION CO., Builders

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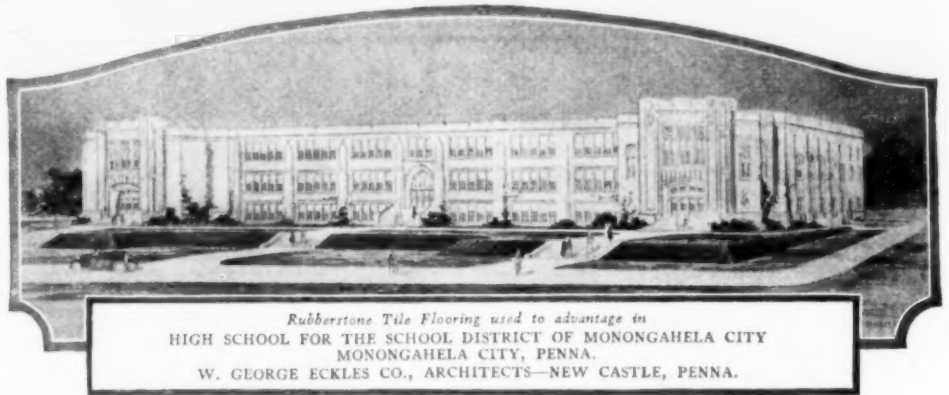
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# DURAFLEX-A



## The advantages of a RUBBERSTONE floor



Rubberstone Tile Flooring used to advantage in  
HIGH SCHOOL FOR THE SCHOOL DISTRICT OF MONONGAHELA CITY  
MONONGAHELA CITY, PENNA.  
W. GEORGE ECKLES CO., ARCHITECTS—NEW CASTLE, PENNA.

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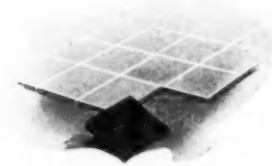
# RUBBERSTONE FLOORS

FOR PERMANENCE



Page 496

### RUBBERSTONE A TILE FLOORING



#### DESCRIPTION

RUBBERSTONE Flooring is made in tile form by the skillful blending of high grade asphalt, asbestos fibre, para rubber and non-fading coloring pigments.

Furnished in tan, olive green, terra cotta, dark brown and black.

The tile comes in four sizes: 6" x 6", 12" x 12", 12" x 24" and 12" x 36", either 1-8" or 3-16" thick.

(Concluded from Page 82)

Proper heating and ventilating of buildings.  
Proper painting of walls and ceiling.  
Modern and inside sanitary toilet rooms.  
Elimination of fire and panic hazards.  
Dry and well-drained playgrounds.

The report shows that of 83 of the elementary school buildings, 55 are of brick exterior and wooden interior construction, fifteen groups of frame buildings, including portables and cottages, and thirteen of fire resistant construction considered as modern buildings. Twenty-three of the old buildings require unilateral lighting; 48 buildings require electric lighting; 34 buildings require painting. The report also shows a need for interior as well as exterior painting.

—Winona, Minn. The school board has adopted a ten-year building program, of which the new junior high school now under construction will form the first unit. Under the "pay as you go" policy, the new building is to be entirely paid for by the time it is completed. A part of the structure will be ready for use in September next, while the remainder will be completed in January, 1926.

The construction of a gymnasium for the senior high school, the second part of the program, is scheduled for next year, and the high school auditorium will follow the next year.

—The school board of Louisville, Ky., has asked for a \$5,000,000 bond issue for new schools. Dr. A. B. Weaver, president of the board, has asked that the proposed bond issue be supported at the coming November election. The new schools are needed to meet demands for additional classrooms and to eliminate rooms unfitted for school purposes.

—A new high school was dedicated at Sullivan, Ind., on January 23rd.

—Bids have been received for the erection and completion of a school to be erected in Jefferson Township, Kosciusko County, Indiana, at an estimated cost of \$60,000.

—Architect W. W. Myers is completing plans for the Wilson school to be erected at Erie, Pa.

—Weirton, W. Va. A new high school has been completed at a cost of \$240,000. Construction work will begin shortly on an elementary school in Weirton Heights, to cost about \$35,000.

—Ovid, Mich. A fireproof high school building will be erected at a cost of approximately

\$200,000. The building will replace one destroyed by fire early in the present year.

—Grand Junction, Colo. A bond issue of \$200,000 was recently voted for the erection of new schools to take care of an increased enrollment. It is the purpose of the board to complete some of the buildings in time for the fall opening.

—Olyphant, Pa. Construction work on a nine-room school is in process at the present time. The building is the first unit of a proposed 24-room structure and will be completed for use with the opening of the fall term. It relieves the congestion in the seventh, eighth and ninth grades and returns these pupils to a full day schedule.

—Hood River, Ore. Seven school districts in Hood River County have presented a petition to the County Boundary Board asking for authority to form a union high school district and to erect a high school building. A building to cost \$200,000 is planned, on a modified plan of the Winston-Salem building. The seven districts involved in the undertaking have a total assessed valuation of \$7,106,960 and a bonding capacity of \$355,000.

The plans provide for all the present departments somewhat enlarged, a gymnasium, an auditorium, a cafeteria, school board rooms, offices and heating plant. At least two school busses would be needed to transport the pupils to the central building.

—After plans for the new John Harris high school, to be erected at Harrisburg, Pa., were submitted by Lapple & Hornbostel, architects, they were presented by Supt. C. H. Garwood for approval, to Ernest Sibley, consulting architect, to the state art commission, and to the state department of public instruction. In each instance, approval was given, thus warranting the belief that the new building will meet its intended purpose in the maximum degree.

#### SCHOOLHOUSE DEDICATIONS

—Supt. J. H. Jarvis of Harriman, Tenn., has been reelected for a two-year term.

—The new Forest Park School at Fort Wayne, Ind., was opened with an address by Dr. Otho Winger of the North Manchester College. Chairman L. C. Ward presided. The presentation speech was made by James E. Ford, president of the board of school trustees. The re-

sponse on behalf of the school board was made by Mrs. R. Earl Peters. President Ford in his address pointed out the progress made by the city school system during the last five years. Mr. Ford said that the capital investment of the school city had increased from \$1,500,000 in 1920 to \$4,500,000 in 1925, during which time seats had been supplied for 7,360 pupils, numerous new buildings erected and old buildings modernized. An indebtedness in current funds of \$480,000 has been reduced to \$180,000 during the period which has also been marked by an increase of 25 per cent in teachers and pupils and an increase of 80 per cent in teachers' salaries. He also declared that the tax levy had been kept at a lower rate than in other Indiana cities. Many of these achievements which have been attained during the incumbency of L. C. Ward, as superintendent, led Mr. Ford to criticize the salary paid the superintendent as not being in proportion to the duties which he performs. He said that South Bend, Gary and Evansville paid their superintendents more salary than Fort Wayne did Mr. Ward and declared himself in favor of giving an increase.

—The rededication of the Franklin school at Chester, Pa., was preceded by a parade in which 850 pupils participated. George Mitchell, president of the school board, presided. William Weiss, superintendent of schools, delivered a brief address. "Sacrifice fills this country and distinguishes it from all other nations," said the superintendent, "and so long as sacrifice is prominent in the hearts of the people, this country will stand."

—The new school at Calhoun Falls, S. C., was dedicated with a program which included State Superintendent James H. Hope as the principal speaker. The school trustees having the construction of the school in charge are the following: Dr. J. V. Tate, chairman; Dr. D. G. Mahon, vice-chairman; Mr. E. M. Lander, secretary; Mr. J. H. Sherard, treasurer; Mr. C. G. McAllister, Mr. J. M. Boyd, Mr. G. A. Tucker, Mr. W. T. Storey and Mr. Wilbur J. Blake.

—Dallas Armstrong of the state department of education, and Dr. Ben G. Graham, superintendent of the New Castle schools, were the principal speakers at the dedication of the new school at West Pittsburgh, Pa.

# DURABILT

## Steel Lockers



LINCOLN HIGH SCHOOL, MANITOWOC, WIS.

In building the Lincoln High School provision was made for the future as well as the present educational demands of a rapidly growing city.

A special committee of school building experts selected the site, worked out the design of building and chose only such items of equipment which their vast experience had proven would add beauty, utility, and durability to the structure.

It was, therefore, most natural that they should choose Durabilt Steel Lockers because of their distinctiveness of design, durable finish, mechanical superiority, security and rugged construction, all of which are indispensable features of locker equipment in a modern school building.

The recessed corridor lockers are of a special ventilated type which are connected by air

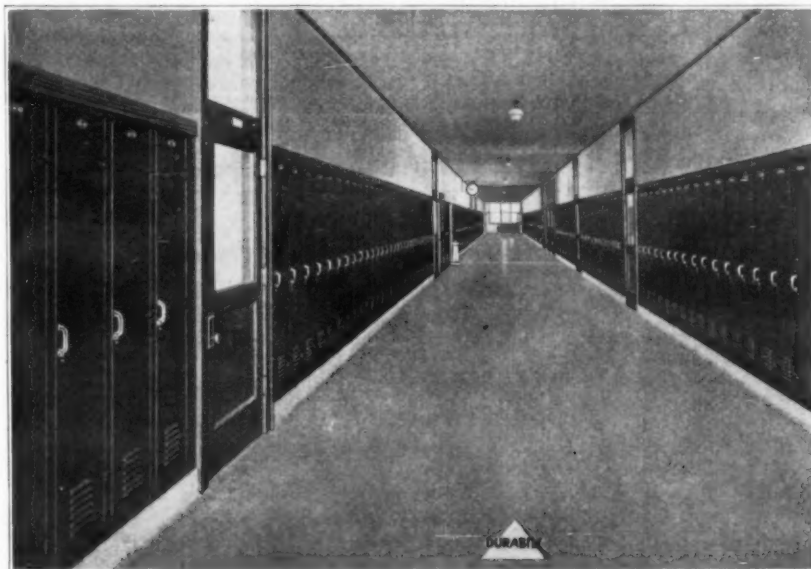
ducts from the tops of the lockers directly to the main ventilating system of the building, thereby giving the maximum amount of air circulation.

Durabilt Steel Lockers are known and accepted from coast to coast as a quality product, and are the universal choice of discriminating buyers, because no other locker embodies so perfect a combination of neatness, sturdiness and unique features at such moderate cost.

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Third Floor Corridor—Lincoln High School.

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## The Business Side of School Administration

Just as the leaders in big business depend upon the specialist for aid in working out their business problems, so too, the school officials are calling upon the specialist to work with them in solving the problems now confronting them in school administration.

From the educational side, greater demands are now being made, enlarging and increasing the scope of our educational system and presenting difficult problems in the educational direction and management of our 25,000,000 school children.

The enormous physical investment, now amounting to over \$3,000,000,000, and the continuous volume of new building involves problems of finance, construction, equipment and maintenance.

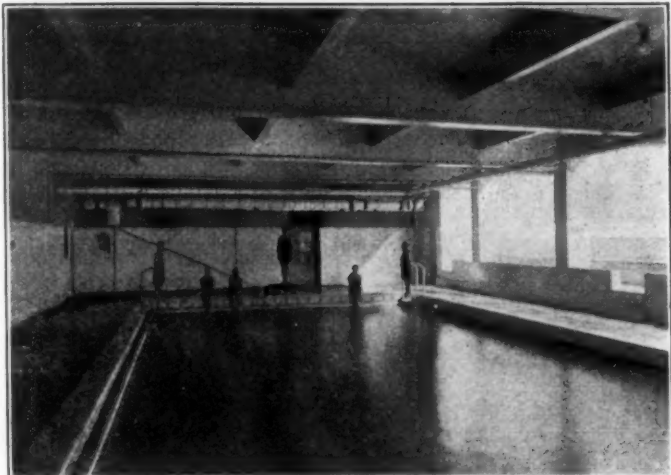
School authorities fully recognize the need of a specialist in school architecture and the position of the schoolhouse architect is firmly established. In like manner, there is a demand for various other kinds of professional service, covering:

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School Bond Issues  
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Appraisals

The PROFESSIONAL SCHOOL SERVICE DIRECTORY is published as a means of establishing a point of contact between the school authorities and professional men offering such services.

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Cementkote is only one of our complete line of Super-Service Coatings, which are designed especially for the protection and decoration of buildings such as yours.

Our experience is at your command. Put your painting problems up to us and we'll make the proper recommendations, or tell you frankly if it cannot be done.

We hope that you'll never look upon us as a cold corporation, but rather as a friendly group of men and women anxious to serve you to the best of our ability.

The walls and ceilings of swimming pool rooms are subjected to constant moisture and, therefore, must be properly protected.

Cementkote has been used for years to resist conditions of this kind. It penetrates deep into the surface, taking a firm hold and making it really waterproof. Cementkote is made in white and sixteen well selected colors, so it is easy to find just the shade that you want.

While we recommend Cementkote for severe conditions inside a school building, it is really designed for painting exterior surfaces of concrete, stucco, brick or stone and will be found to be unusually satisfactory on surfaces of this kind.

The coupon below brings complete facts and prices on Cementkote. We sell direct to public and private schools.

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Name..... School..... City..... State..... 5-35



## TEACHERS STUDY TAX FACTS

The Illinois Teachers' Association has unearthed some gross tax inconsistencies which it has presented to the state legislature. The research department of the teachers' organization has been engaged in compiling some facts concerning the subject of taxation which they think should arrest public attention. It is the contention of the committee conducting the investigation that not only are some classes of property assessed at a figure much below the "fair cash value" but other classes bear unjust burdens of assessment in comparison with other classes. In addition, it is charged that there are inequalities in the assessment of other classes of property of the same general class.

It is asserted by the teachers' research committee that lands that sell for \$10,000 in McHenry county have an equalized assessed value of \$2,502; but in Lake county land of the same value is assessed at only \$1,197.

Under the same conditions, a Sangamon county land owner is assessed \$2,892 and pays \$18.81 in state taxes; but a Whiteside county land owner is assessed for only \$1,248 and pays \$8.11 state taxes.

A comparison of acre property with city lots in 22 counties shows that \$10,000 worth of the former is assessed at \$2,003 and pays \$13.02 state taxes; while the latter is assessed at \$1,616 and pays \$11.50 state taxes.

But even in cities and villages there are wide differences and great inequalities. The owner of \$10,000 worth of real estate in Springfield is assessed \$2,334 and pays a state tax of \$15.17; but the same actual value of real estate in Maywood is assessed at only \$1,351 and pays \$8.65

state taxes. In Belvidere \$10,000 worth of real estate is assessed at \$2,869 and pays \$19.65 state taxes; the same value in Melrose Park is assessed at \$1,077 and pays but \$6.94 in state taxes.

The teachers' committee asserts that many assessors make the mistake of assessing all property as low as the lowest and which further violates the law which says that all property must be assessed according to its fair cash value. The teachers' committee maintains that it is only seeking the same treatment for all rather than partiality and preference for a few.

## UNIFORM SCHOOL FINANCE ACCOUNTING

A distinct service to the school interests of Michigan has been rendered by the state teachers' association of that state in the formulation and publication of uniform systems of school accounting. The study, which was in the hands of leading school men and took seven years' time, resulted in a method of financial procedure and

a series of blanks and forms for child accounting, and the ascertaining of unit costs.

The value of such a departure will become apparent when it is remembered that school accounting is now performed in a variety of ways making it difficult, and at times even impossible, to compile comparative data and figures. To know by comparison what another school system is doing, its departure, its expenditures, its achievements, serves in the direction of what ought to be and can be done, at home. In brief, it tends toward greater efficiency.

The Michigan study, which was worked out by Arthur B. Moehlman, Wilford L. Coffey, Charles D. Dawson, Will L. Lee, and Arthur A. Rother, is accompanied by a series of account blanks and forms, and explanations for their use. State Superintendent Thomas E. Johnson recommends the adoption of the new record system, believing that "their installation will place the school finances of the state upon a comparable basis, and make the school accounts a dependable index of the school districts unincumbered balances."

## FINANCE AND TAXATION

—A bill has been introduced in the Pennsylvania legislature which is intended to bring relief to the school districts of the state, particularly where the present limitations of the tax levy have seriously handicapped the efficiency of the schools. It appears there are districts with buildings under way, which cannot be finished because of a lack of funds. Many of the districts even find themselves without money to pay the teachers' salaries before the close of the term.

—New York, N. Y. Dr. John H. Ferguson, chairman of the committee on buildings and sites, has issued an official announcement, in which he points that in view of the opening of 55 new schools this fall, it was deemed proper to slightly reduce the program for the next few months. It is planned to check the results of the opening of the new structures before proceeding with the completion of the work. Further studies will be made with a view of changing the types of buildings to make for greater economy in both construction and administration.



Property Values Increase Enormously when the Schools Buy Building Sites.—New York World.



## Paint More Rooms with Your Present Appropriation



RESULTS produced on a wide variety of school work, over a period of years, show that painting with DeVilbiss spray-painting equipment insures not only an improvement in the quality of the work but also an appreciable lowering of the cost. Maintenance funds are made to go further.

Painting with the

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**Spray-painting System**

one man does the work of four to five brush painters—saving up to 80% in labor cost alone. There is no dripping and spattering of paint to clean up; there is less scaffolding required to move about—giving an additional saving in time. In many cases, less paint is used to accomplish best quality results—effecting a still further saving.

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which may be used either to pay the salaries of additional teachers, or for distribution to cities and counties on the basis of the average daily attendance.

The changes which are incorporated in the new general educational bill, offer a number of advantages of material aid to the schools of the state. Under the bill a premium is put on attendance, making the county authorities more eager to encourage and increase attendance. A longer school term is provided, without which no material progress is possible. The average daily attendance per teacher is increased, with the result that the cost of education does not become burdensome and the benefits of mass education are not lost. Consolidation of schools is encouraged. The teacher is offered a better position, a longer term and more salary, insuring opportunity for better teachers in every rural district.

—Minneapolis, Minn. The cost of education in the city, which was less than the cost of the remainder of city government a quarter of a century ago, has not only caught up, but has passed the cost of city government, and now takes the largest slice out of the tax dollar, according to Mr. George M. Link, secretary of the board of estimate and taxation.

Out of the \$19.42 taxes on each \$1,000 valuation for city purposes in 1900, \$6.37 went for education, and \$8.55 for city government, but today with a rate of \$56.24 per \$1,000 assessed valuation, \$22.17 goes for education and \$20.08 for city government.

For many years the cost of city government, exclusive of education, was higher than the education item, but in 1923 it dropped behind the cost of education, which has maintained the lead ever since.

—Indianapolis, Ind. The naming of a budget committee to have charge of all budget requests from department heads has been proposed by Mr. R. O. Johnson, business director of the school board, with the purpose of eliminating transfers of funds from one item to another during the year. During the last year the transfer of funds has been greatly reduced, but with the new plan in operation, department heads will follow the budget. It was brought out that during the period from July, 1924, to March, 1925, transfers totaling \$28,788 had been made in the case of 78 different items.

—The school board of Abington Township, Montgomery County, Pa., is seeking a higher assessment of property. The relation of assessed values to real values is about 40 per cent. The rate has been held down so that local taxpayers pay a smaller share of the county tax, the latter being based on the same assessment. This action has reduced the district's borrowing capacity and required an apparently high tax rate. An attempt will be made to raise the assessed valuation of the district to more nearly the true value, since it is difficult to keep ahead of an expanding school population without adequate accommodations.

—Bremerton, Wash. A special ten-mill levy for the maintenance of the schools for the school year was carried with only fifty votes in opposition.

—Chicago, Ill. Supt. William McAndrew has recommended a referendum vote to increase the tax rate for educational purposes from \$1.92 to \$2.92, to meet a new schedule proposed for the teaching staff. Supt. McAndrew shows that the city is not overburdened in the support of education. Chicago pays \$11.66 per pupil for education, which is \$4.32 less than New York and \$1.72 less than the average of cities having more than 500,000 population.

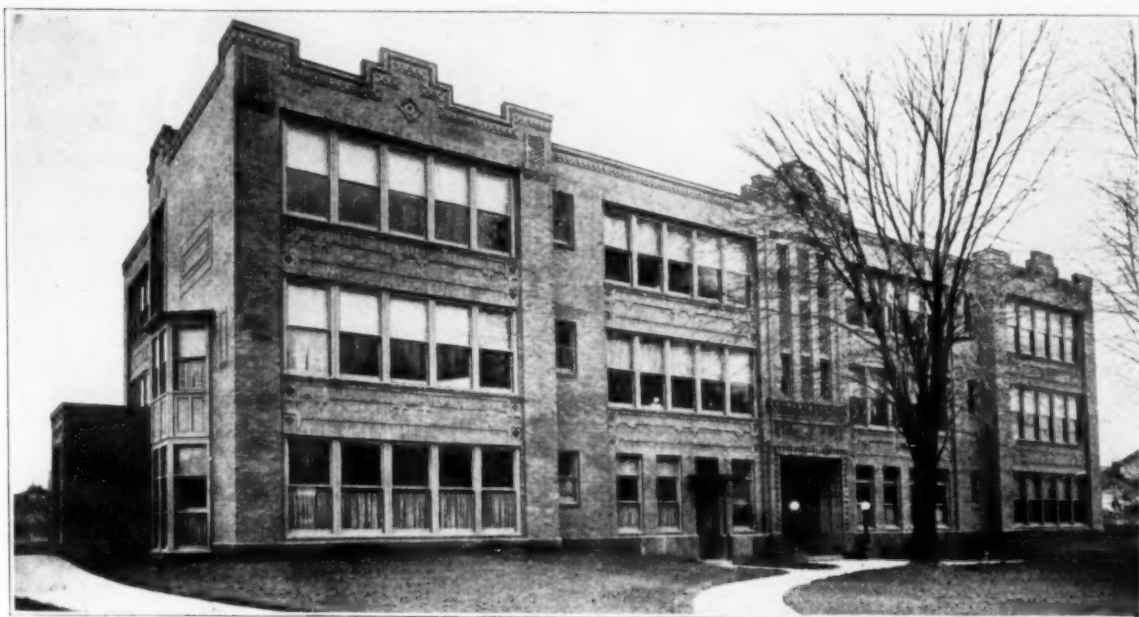
—Without expressing himself on the general idea of free textbooks, President W. B. Reed, president of the Peoria, Ill., board of education, argued against the introduction of the system for the local schools. Mr. Reed held that the board was working on a margin of \$15,000, and that free textbooks would cost \$60,000, leaving a deficit of \$45,000. The board thereupon unanimously decided against free textbooks.

—The Kansas City, Kansas, board of education favors the "pay-as-you-go-plan" for school buildings. The city is permitted to levy 30 cents on the \$100 for repairs and new buildings. Principal J. F. Wellemeyer in discussing the subject says: "School taxes are levied under, and in accordance with, the law for the purpose of maintaining schools, but we find that only a certain proportion of the money raised by taxation is ever used for the actual paying of teachers, buying of supplies, and erecting and maintaining buildings. In many districts the larger share of money raised by taxation goes for the payment of interest on bonded indebtedness."

—"A dozen urgent demands and not near enough money to meet them," was the way D. M. Pinkerton, president of the Kansas City, Mo., board of education made reply to a delegation of citizens who desired a new school. "That last bond issue should have been for ten or fifteen million dollars instead of five millions, which is not near enough to take care of the new buildings we need. Gentlemen, we are sorry, but frankly we can't do it. We just haven't got the money."

—The special election for a school bond issue of \$110,000 to complete the new high school in the Borough of Wilson, Northampton County, Pennsylvania, resulted in a majority in favor of the issue of 226 votes. This issue of bonds was made necessary by reason of increased building costs and increases in the original plans of the school. Another bond issue of \$150,000 was approved last fall when the building was first proposed. When the bids were opened it was found that about \$240,000 was needed for the size and style of building needed in Wilson District. The school board decided to build within the means afforded by the first issue (\$150,000) and awarded contracts omitting certain alternates not immediately needed and modifying the plans, thus bringing the contract price within their available money. A campaign of information was immediately begun and the voters informed of the situation. Great interest was aroused in this and the various organizations of the district gave their hearty support by resolution and personal efforts of the members. A circular of information was the chief means of giving the facts to the voters. The board of education consists of Mrs. Minnie S. Schug, president; George F. Donecker, treasurer; Mrs. Eliza J. Martin, secretary.

—A \$150,000 school bond issue was defeated at Rutland, Vt., which has created an embarrassing situation for the school board. The Rutland News says: "After taking pains in preparing a budget, explaining at the time that an additional appropriation from the grand list would be necessary to meet expenses during the year, the voters, chiefly because they did not understand what they were doing, killed this warning along with the \$150,000 bond issue which was to build a high school structure here."



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### Cabot's Quilt

is the standard deadener—sound-proof, sanitary and fire-resistant.

Sample of Quilt and book on School-house Deadening sent on request.

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New Castle, Pa.  
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## Financing Education in Iowa

A staff of experts has gone into Iowa to ascertain what that state expends and what it can afford to expend for education. The results of the survey, which was made by the Educational Finance Inquiry Commission, have been published in a 270 page volume by the Macmillan Company.

The report is divided into two parts, the first dealing with the question, "What does Iowa expend for education?" The investigators here summarize their findings as follows:

"The total cost of all public education, estimated by the method of cash disbursements, was about fifteen and one-half million dollars in 1910 and nearly sixty-three million dollars in 1921, an increase of three hundred and seven per cent. This increase was gradual during the earlier years of the period, accelerated from 1915 on, reached a maximum in 1920 when three million more than the entire expenditure in 1910 were added during the one year, and slowed up again in 1921. The rate of increase in capital outlay and interest payments was greater than that of expenditures for current expenses. A study of index numbers shows that the rise in prices and lowered purchasing power of the dollar is the cause of much of this increase. When the expenditures of the public elementary and high schools are considered separately, the increases are almost exactly at the same rate as that of all public education.

"The cost of elementary education per pupil in average daily attendance was about thirty dollars in 1911, about forty dollars in 1916, and about eighty dollars in 1921 and 1922. Teachers' salaries and other than salary costs advanced at about the same rate. The cost of high school instruction per pupil in average daily attendance was about fifty-five dollars in 1911; seventy dollars in 1916; one hundred and forty dollars in 1921, and one hundred and thirty dollars in 1922. In general, teachers' salaries and other than salary expense increased at about the same rate.

"For the entire educational program, more than eighty-two per cent of the funds come directly from the locality, more than sixteen per cent from the state and six-tenths of one per cent from the national government. For

the elementary and secondary schools alone, about ninety-six per cent of the funds come from the locality alone, nearly four per cent from the state, and very little indeed from the national government.

"The bonded debt amounted to about six and one-half million dollars for school purposes in 1911; to nearly sixteen million dollars in 1916; to more than forty million dollars in 1921; and to nearly forty-eight million dollars in 1922. Relatively little of the principal is being paid off. In general there is a bonded debt of more than \$100 per pupil in average daily attendance. The median consolidated school has more than \$250; and certain extreme cases have more than two thousand dollars of bonded debt per pupil in average daily attendance.

"A general estimate of the cost of all education in the state, including private and parochial education, amounts for the year 1921-22 to nearly sixty-five million dollars. To carry the present program into effect upon the present price level would require nearly three million dollars additional."

### What Can Iowa Afford?

The second part deals with the question of "What Iowa Can Afford to Expend for Education?" In response to this question the investigators say:

"The amount that Iowa can afford to expend upon education rests upon a series of considerations. The state is economically strong and vigorous. An advance from thirty-one million dollars levied in taxes in 1910 to one hundred and five million in 1922 increased the burden of taxation per unit of real wealth only forty per cent. The increase in the cost of education during the period was about three hundred and seven per cent while the increase in wealth was one hundred and forty per cent and the increase in income during 1910-21 was seventy-seven per cent. The people are favorably disposed toward education. They have confidence in the organization and administration of schools. The boards of education are in close contact with the people.

"The two serious obstacles to the development of the educational program in Iowa are the antiquated system of taxation and the ineffective

system of state subventions. If the system of taxation can be improved more adequately to reach the sources of revenue and more equally to tap them, great good will be accomplished. Furthermore, the present system of school support almost exclusively from the locality makes for grave inequalities, some communities paying much more than they can afford for meager facilities, others paying for an expensive system with little effort. A more rational system of state aid would accomplish this. A modern system of accounting would enable people to know the facts, would permit educational executives to administer the finances of the schools on a business basis, and would prove a basis for budget making."

### Tax Reforms are Needed

One of the most instructive features of the report is found in the tax discussion entered upon by the investigators. They come forward in definite conclusions on the subject of tax reforms. Here is what they say:

"As has been suggested above, it will be difficult if not impossible to finance the educational program in Iowa unless measures be instituted to improve the functioning of the present taxing system and more adequately to make it reach the sources of revenue. Since school revenues are derived from levies upon the general property base, improvement in the matter of school support depends upon reform of the general tax system of the state.

"Iowa has been one of the most backward states in reforming its tax system to conform with general changes in economic conditions. The general property tax continues to be the mainstay of the system. From time to time changes have been introduced in the methods of administering certain features and parts of this tax, but the underlying principles have continued practically unchanged. The property tax has in the course of time been supplemented by other taxes, but 93 per cent of the tax revenues continue to be derived from the property taxes. The problem of tax reform in Iowa is, therefore, the problem of improving and further supplementing the property taxes.

"To a very high degree the success of a general property tax depends upon the efficiency of assessment. In few states is the work of assessment less efficient than in Iowa. Even

(Concluded on Page 92)



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(Concluded from Page 90)

the most casual study of the reports of the state auditor reveals serious injustices in the distribution of the tax burden among the various assessment districts as well as among individuals within these districts. A reasonably conservative estimate of the present situation would seem to indicate that real estate is under-assessed by the amount of 60 per cent. By reason either of under-assessment or evasion only from 10 to 25 per cent of the personal property appears on the assessment roll.

If all property in all assessment districts were uniformly under-assessed, there would be no serious difficulty, but such is not the case. A wide variation in the ratio of assessed value to actual value exists among individuals in a given assessment district, and among the assessment districts. Variations of from 50 per cent to 100 per cent have been found to be the rule rather than the exception. Equalization is in the hands of ex-officio bodies with the result that it is perfunctorily performed.

"A temporary tax commission was appointed by the Governor in 1911. In 1912 this commission made a report embodying recommendations and suggestions for the improvement of the tax system. These suggestions and recommendations advocated the establishment of: (1) A permanent state tax commission; (2) County assessment or at least rigid county supervision of local assessment; (3) A direct state inheritance tax; (4) A state income tax to replace the flat rate of five mills on moneys and credits; (5) A constitutional amendment making possible the exclusive state taxation of certain public service corporations.

"The first two recommendations are directed particularly toward improving the administration of the property tax. Students of taxation are now generally agreed that satisfactory assessment and equalization cannot be obtained in the absence of highly centralized administrative machinery such as is embodied in these recommendations. It is almost certain that should Iowa reorganize its machinery of assessment along these lines the assessed valuation of property would be more than doubled and to a high degree the inequalities now found among individuals and assessment districts would be eliminated.

"Students of taxation have long been agreed that it is practically impossible to administer a general property tax upon intangible forms of personal property. In many states this form of property has been practically exempted from property taxation, and the income from this source has been reached by a tax upon personal incomes. The tax system of Iowa would be greatly improved by following this plan. The property tax should be made applicable to only real estate and perhaps to those forms of tangible personalty most easily and effectively assessable, and a state income tax should be established to reach the income from other forms of property. The income tax should also be applied to unfunded incomes, such as salaries, wages, professional fees, etc. A reasonable tax upon these sources of income would make a significant addition to the public revenues, since under the present revenue system persons enjoying these incomes pay taxes only in case they own taxable property, with the result that much tax-paying ability is not reached."

### A Meritorious Study

There has been a tendency on the part of investigators to gather a mass of facts and data, assemble them into tables and graphs, and then shirk the task of following these up with conclusions and recommendations. Those who pay for the cost of surveys have a right to exact more than a series of tables and graphs which may or may not give the real information sought. They have a right to exact the investigator's own conclusions and the recommendations which he arrives at in the course of his studies.

The present study is particularly valuable in that the investigators not only collate into intelligent form the facts and figures that have come to them, but they come forward manfully and point out the remedy. Whether Iowa will accept the remedy is another matter. But, Iowa, in this masterful study, is given the benefit of an expert judgment as to just what must be done to secure the relief now sought. Thus, the following sums up some of the conclusions reached:

"Thus, no matter whether Iowa is poor or rich, whether educational expenditures will rise or fall, whether other expenditures of government will increase or not, the problem of the

support of education in Iowa is complicated by the local assessment of property, by the local levy of taxes, and by the lack of a more equalized distribution of the benefits of education and a more equalized method of support. The distressing stories that were told in Des Moines during recent legislative sessions of confiscatory taxes, while usually exaggerated, here and there had some foundation in fact. And at the same time, statistics seem to show that Iowa occupied a very favorable position in relation to its neighbors in wealth, in taxes levied, and in economy of government expenditures.

"The conclusion from the facts that Iowa is well off financially and at the same time certain people are heavily overtaxed, is simply that there are many people who do not pay their fair share. This situation cannot be remedied without a reform in the method of taxation."

The inquiry was conducted by the following educators: William F. Russell, Director, Professor of Education and Dean of the College of Education, University of Iowa; Thomas C. Holy, Assistant Director, Assistant in Instruction, College of Education, University of Iowa; Raleigh W. Stone, Assistant Director, Associate Professor of Economics, College of Commerce, University of Iowa; H. H. Davis, W. F. Delaney, M. C. DelManzo, Ollie M. DeWolfe, Secretary; A. L. Heminger, C. L. Huffaker, H. S. Robson, L. R. Wilkerson.

### THE SIZE OF CLASSES

"The results (of a survey of 124 classes in grades 2, 5, 7 in four large Ohio cities) show that large classes are approximately as effective as classes half their size," he said. "Small classes were found to be of most benefit to the second grade, a little less effective in the fifth grade and least effective in the seventh grade. Average school procedure in forming classes is just the reverse.

"It is evident from the results that teachers either loaf on the job when classes are small or that their efforts to help the pupils have the contrary effect. Most educators say that the main advantage of small classes is that the teachers can give individual instruction. Either this individual instruction hinders the children in their development or the teachers do not give it."—Prof. P. R. Stevenson, Columbus, O.

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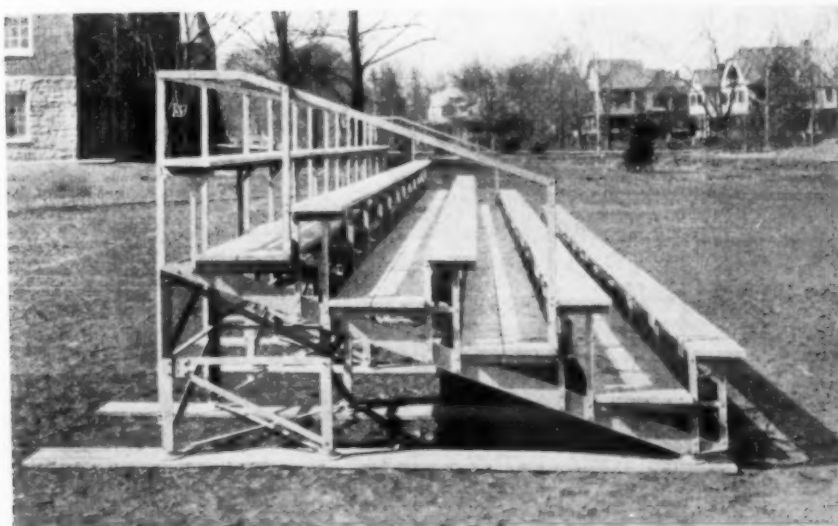
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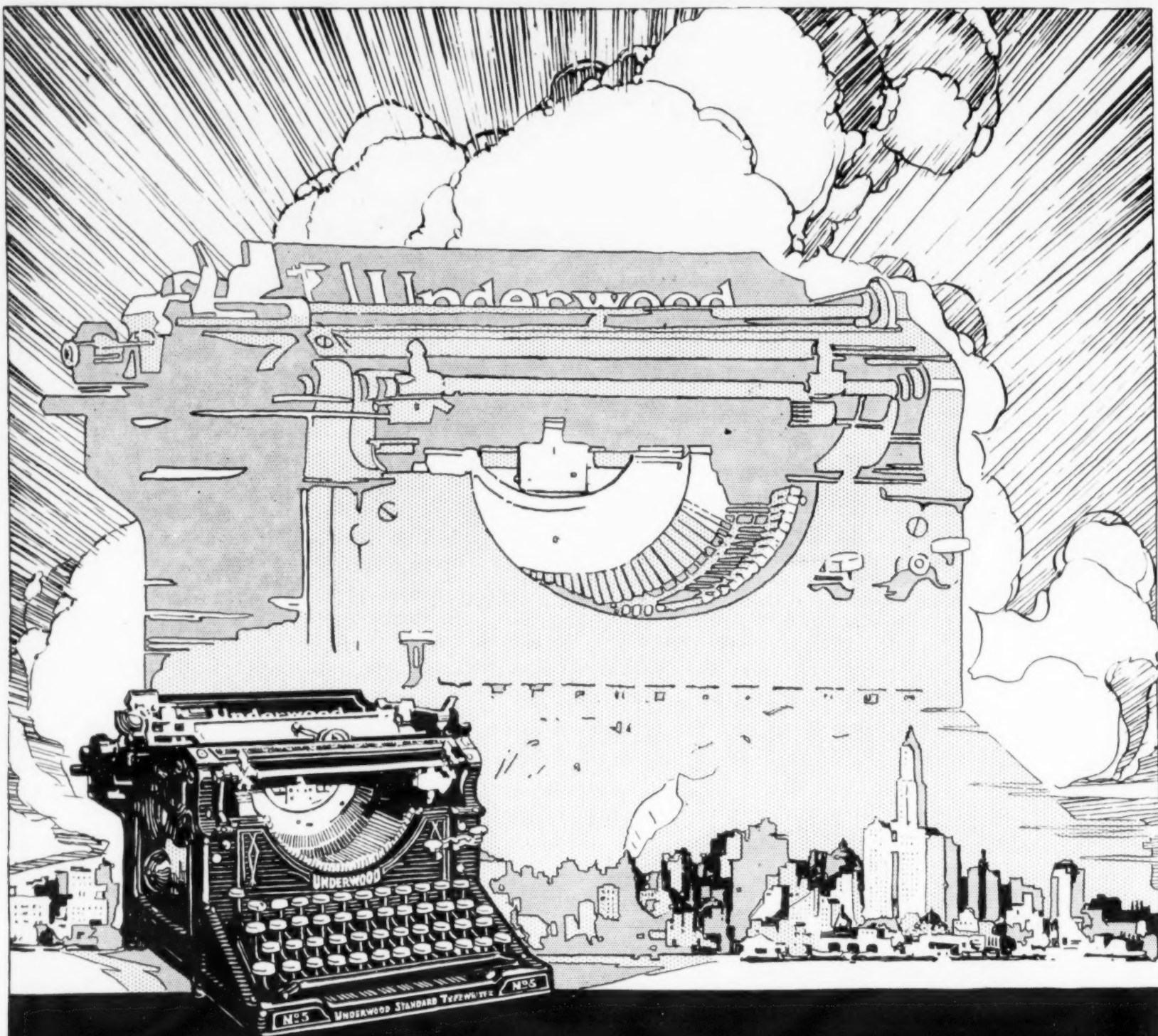
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## SCHOOL LAW

### Schools and School Districts

In proceedings to incorporate territory into a new independent school district, under the Iowa supplementary code of 1913, § 2794, an affidavit of appeal filed with the county superintendent, appealing from the resolution of the board of directors of the old district, ordering the election, taken on the day of the election but before it, and within thirty days after the passage of the resolution, as provided by the Iowa code of 1897, § 2818, is held to have raised questions within the jurisdiction of the county superintendent, where it alleged that the boundaries of the district if changed would not conform to the code of 1897, § 2798, that proposed change would make it impossible for a certain district to maintain a proper school, and that a certain district would not be better served by a change, but would be injuriously affected thereby.—Consolidated Independent School Corporation of St. Anthony, Marshall County v. Shutt, 201 N. W. 335, Ia.

The Kansas revised statutes, 72-304, 72-305, making regulations covering ordinary school districts applicable, where territory is sought to be transferred from one rural high school district to another, authorizes such transfer, although the application therefor is not signed by its owners or occupants.—State v. Rural High School Joint Dist. No. 8 of Wabaunsee and Shawnee Counties, 231 P. 337, Kans.

A new method prescribed by the Kansas revised statutes 72-304, 72-305, for attaching to a rural high school district territory not previously a part thereof is controlling and exclusive.—State v. Rural High School Joint Dist. No. 8 of Wabaunsee and Shawnee Counties, 231 P. 337, Kans.

The Kansas revised statutes, 19-2607, authorizing a new incumbent of a county office to complete unfinished business or records from

a written memoranda, authorizes the successor of a deceased county superintendent, on whom notice of an application for a change of school district boundaries was served, to legally act at a hearing.—State v. Rural High School Joint Dist. No. 8 of Wabaunsee and Shawnee Counties, 231 P. 337, Kans.

A variance in the published notice of an election for dissolution as to description of boundaries of a consolidated school district sought to be dissolved, due to typographical errors, was immaterial in view of the acts of the Iowa thirty-ninth general assembly, §§ 5, 6, 7, 30, 32, 33, 38, where no elector was misled or prejudiced thereby, and the petition and records of the district correctly described its boundaries.—State v. Peterson, 201 N. W. 71, Ia.

A notice of election to dissolve a consolidated school district should correctly describe the boundaries of the district sought to be dissolved.—State v. Peterson, 201 N. W. 71, Ia.

### School District Government

The primary nomination of candidates for members of the Morgan county board of education from school districts in the county, as provided by the Alabama local acts of 1923, p. 258, is void, though the terms of two members of the board are expiring, as such vacancies are to be filled under the Alabama general law (general acts of 1915, p. 281, § 2, and the school code of 1919, p. 16, art. 5, § 2), by electors from the county at large.—Kyle v. Wiggins, 102 So. 143, Ala. App.

The annual meeting of school district for the election of officers must be held at the time specified in the Nebraska Comp. statutes of 1922, § 6268, and the election cannot be adjourned to another day, in view of section 6275.—State v. Talich, 201 N. W. 144, Nebr.

After the expiration of the date provided by law for the election of school officers under the Nebraska Comp. statutes of 1922, § 6268, the power to accept the resignation of a moderator and to appoint his successor vests in the board of trustees under section 6332.—State v. Talich, 201 N. W. 144, Nebr.

In view of the Oklahoma Comp. statutes of 1921, §§ 10342, 10364, 10382, and 10393, a contract by a school district to pay a member of the district board a salary or compensation for superintending the construction of a schoolhouse

is void as against public policy.—Youngblood v. Consolidated School Dist. No. 3, Payne County, 230 P. 910, Okla.

Representations as to the character of a building to be constructed, made by one selected by the chairman of the board of trustees of a school district, were not binding on the board, where it had not authorized its utterance.—Vance v. Dobson, 266 S. W. 368, Ky.

### School District Property

The Oklahoma Comp. statutes of 1921, § 10422, restricting expenditures for public improvements in excess of \$200 to written contracts and in excess of \$500 for the erection of public building on sealed proposals to the lowest responsible bidder, is inapplicable to a contract with an architect for plans and specifications for a contemplated building, preliminary to the receipt of sealed proposals for the erection of such a building.—Weathers v. Layton & Forsyth, 230 P. 750, Okla.

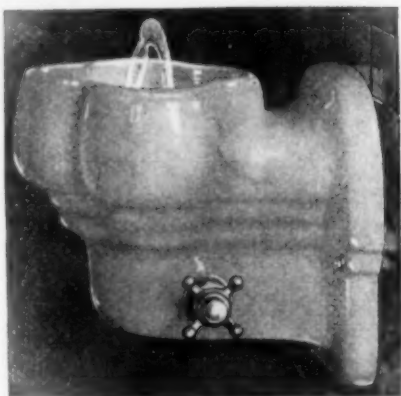
A municipal contractor's bond conditioned on his compliance with the terms and conditions of his contract for construction of a school building, and given pursuant to the Baltimore city charter, § 16, is held not a guaranty of payment for material furnished by the subcontractors.—City of Baltimore v. Maryland Casualty Co., 126 A. 880, Md.

### School District Taxation

The city of Alton and the Alton community consolidated school district No. 151, are separate corporate entities, organized under the different laws for specific purposes, and each is clothed with the power of taxation for its corporate purposes only.—Board of Education of Alton Community Consol. School Dist. No. 151 v. Alton Water Co., 145 N. E. 683, Ill.

The failure of a township school director to write up the minutes of an annual school meeting, at which a tax was voted, in his record until after the tax had been spread and the warrant for collection was in the hands of the township treasurer, and the tax had been duly reported to the township clerk by the district officers, did not invalidate the tax: the action of the voters at the annual meeting controlling, under the Michigan Comp. laws of 1915, § 4098, and report to the township clerk, under section 5677, constituting evidence of facts therein stated and authorizing levy.—Auditor General v. Tawas Beach Ass'n, 201 N. W. 450, Mich.





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A school tax required to be levied before the first Tuesday in August, and levied by the directors at a meeting, held on the day previous, is held valid, though a certificate of the levy filed with the clerk was not made until August 11th, and not filed until August 13th, one day before the time when required to be filed, particularly in view of the Illinois school law, § 190.—People v. Illinois Central R. Co., 145 N. E. 719, Ill.

Under the Michigan Comp. laws of 1915, § 5677, a report by a district school board to the township clerk of a tax levied at the annual meeting is authority for assessing and collecting officers, and the tax so reported cannot be held void if such report is true in fact, the burden of showing the report untrue in fact resting upon one objecting to the tax.—Auditor General v. Tawas Beach Ass'n, 201 N. W. 450, Mich.

### Teachers

Though a teacher had no formal application on file when the school board at the meeting made an order employing her, when she signed a written contract prepared by the clerk of the board and attested by him, she became "equally bound" thereby as required by the Missouri revised statutes of 1919, § 11138, and contract of employment was complete.—Baxter v. School Dist. of Miller, 266 S. W. 760, Mo. App.

Under the Missouri revised statutes of 1919, § 11137-11138, and § 2164, requiring contracts by school districts, etc., to be in writing and subscribed by parties thereto or their agents, etc., where the board of directors at a meeting made an order electing a teacher, made it part of a record, and she afterward signed a written contract which was signed on the part of the school board by the clerk thereof and attested by him, such contract was binding without the president's signature.—Baxter v. School Dist. of Miller, 266 S. W. 760, Mo. App.

A school district may terminate, in good faith and on timely notice, a teacher's contract providing for the termination by either party, on thirty days' notice, on reasonable grounds, because of insufficient funds to pay the running expenses for the school year.—Brown v. Board of Education of City of Bonner Springs, 231 P. 72, Kans.

A contract relationship between a school board and a teacher could not be terminated by the board's acceptance of a teacher's resignation to take effect on a date prior to that stipulated in

the resignation.—State v. Public School Teachers' Annuity and Retirement Fund Trustees, 201 N. W. 383, Wis.

Information given the principal of a public school at her request by school committee, specifying the grounds of dismissal as dissatisfaction with her work and belief that she had not demonstrated constructive leadership and the necessary administrative capability, was sufficient compliance with the Massachusetts general laws, c. 71, § 41, and section 42, as amended by the statutes of 1921, c. 293, and she was not entitled to more detailed specifications.—Corrigan v. Smith, 145 N. E. 530, Mass.

### Pupils

Under the Oklahoma Comp. statutes of 1921, § 10465, 10576, in a consolidated school district, where all pupils living two or more miles from school are furnished conveyance at the district's expense, a pupil legally transferred from another district, when going to school over the direct traveled route, from home to school, which intersects the route traveled by those conveying the school children at a point two miles or more from the school building, is entitled to conveyance.—Wellston Consol. School Dist. No. 1, Lincoln County v. Matthews, 230, P. 739, Okla.

### LAW AND LEGISLATION

—A bill in the California legislature seeks to abolish the office of state school superintendent and place the duties of that office in the hands of a director to be appointed by the state board of education.

—The Hartrauft measure introduced in the California legislature provides that all teachers subject to payment of retirement salaries shall file information as to their age, birthday, and teaching experience with the state department of education.

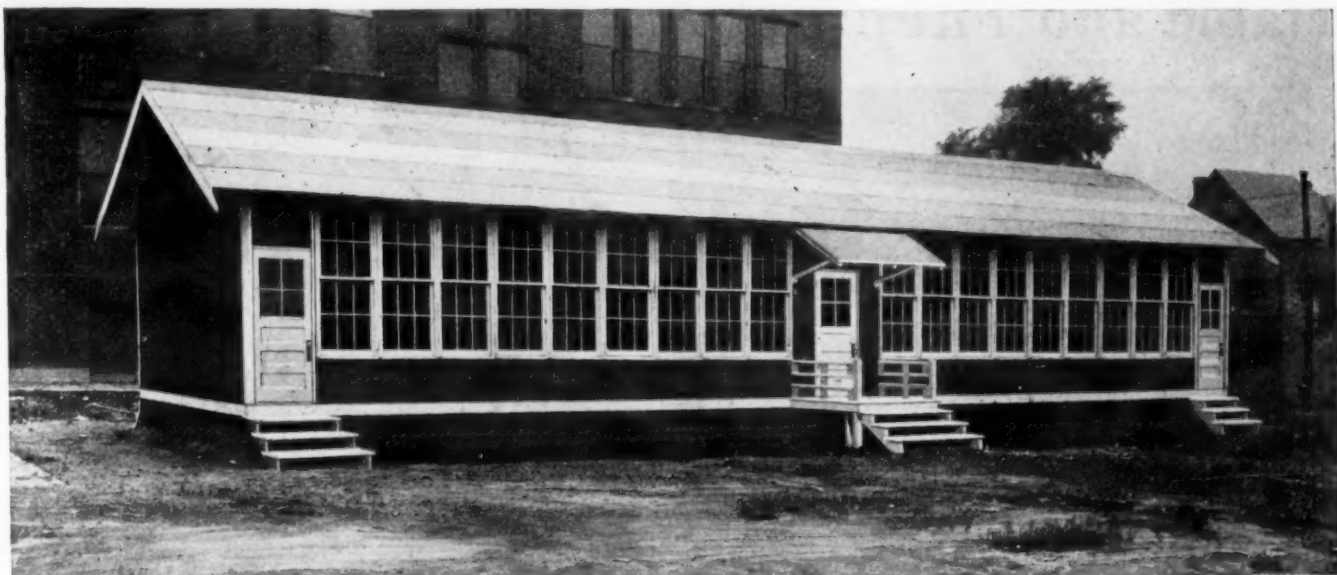
—The teacher tenure act of New York provides that where a teacher is employed in a district containing eight or more teachers, for two consecutive years and is re-engaged for the third year, that teacher remains permanently on the pay roll of the district unless removed for incompetency, disobedience to orders or other specified reasons, after charges have been filed and a hearing held. The proposed amendment to the act broadens the scope of the bill to include those educators actively engaged in teaching or in supervisory work actually in the schools, who were not included in the original

act. The amendment has been severely attacked. "I had always been under the impression that our schools were established primarily and solely for the purpose of furnishing education to our children and assisting in making good citizens out of them," said Assemblyman Anderson, "but what I gather from the advocates of the plan, it seems that the proponents believe the school system was established for the sole purpose of furnishing jobs for teachers."

—Superintendent M. A. Becker, of the Wyoming Park district No. 7 near Grand Rapids, Mich., has brought suit for \$10,000 damages against Jacob Kroodsma, a member of the board of education. The declaration alleges Mr. Kroodsma made statements in the presence of Roy C. Coolidge, James K. Weldon and others that "he (Mr. Becker) pocketed funds collected by him from school children of the district," and "he has appropriated to his own use money belonging to the school," and also charges such statements were made with malicious intent to injure his name.

—A bill in the Pennsylvania legislature contemplates giving the Philadelphia board of education the authority to compel uniform dress for the pupils in the schools. Dr. S. J. Slawson, superintendent at Johnstown, is not in sympathy with the idea. He says: "I question whether it would be of educational value to school authorities to stress this point to any great extent. It is not only foolish but unjust for the Philadelphia board to attempt such a measure. I would oppose this movement for either of these two reasons—that it involves personal liberty and that it would only show that uniformity is a deadening influence in such cases."

—A bill introduced in the Illinois legislature provides for a state textbook commission whose duty it will be to: (1) Investigate the courses of study in the elementary schools. (2) Investigate the merits of all textbooks now used in such courses and such other textbooks as are advisable. (3) Examine manuscripts available for use as textbooks and compare them with the textbooks now in use. (4) Recommend to the director of registration and education what textbooks or manuscripts for textbooks shall be adopted for use in the schools. (5) Recommend to the director of registration and education what new textbooks or manuscripts should be prepared and advise him as to the best persons to do that work.



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"The rooms are the most pleasant of any in the Township, and the finish of the interior, and the light coming in all along the side of the rooms, make them so cheerful that the teachers who were moved from the large building congratulate themselves on the move."

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SECTIONAL

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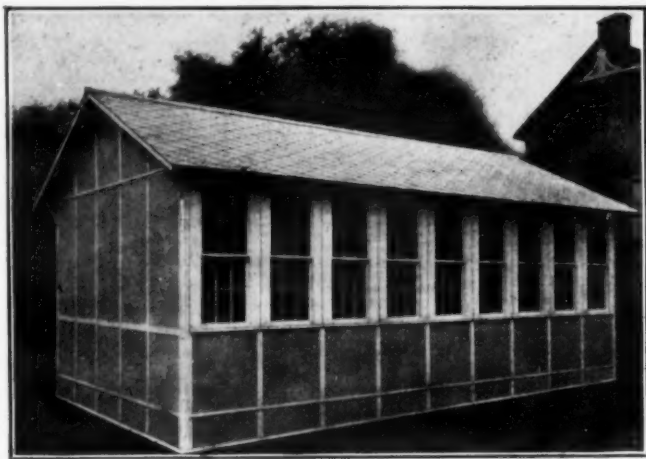
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### TOXIN-ANTITOXIN PROCEDURE IN SAGINAW SCHOOLS

Dr. William DeKleine, former health officer of Saginaw, Mich., in a recent issue of Public Health (Lansing), outlines the procedure for giving the antitoxin treatment against diphtheria, and discusses the necessary educational work which preceded it, and the probable results which attend the treatment.

Dr. DeKleine, in his article, shows that out of an enrollment of 10,000 children in the grades, approximately 4,000 have been immunized against diphtheria. The work covered three school year periods beginning in the fall of 1922, and if continued for four years more, about 75 per cent of the grade children will have become immunized.

Toxin-antitoxin is administered by the health department free to children in the kindergarten, first and second grades, and to pre-school children whose parents sign a consent card. The Schick test is omitted for the younger groups, but in the case of older groups, immunization is given following the Schick test. It has been found impossible to "Schick" 10,000 children, or even half that number in one year. It is the policy in Saginaw to immunize all or nearly all of the lower grades in place of scattering the efforts of the physician over the entire school and immunizing only a small percentage in each grade. Diphtheria is more prevalent among younger children, and therefore it is important to reach as many of these as possible.

The immunization work was begun with educational work among the parents and children. Talks were given before parent-teacher associations and newspaper stories were prepared. Nurses made home calls and teachers encouraged the children in every way possible, they in turn carrying the message home to the parents. As a result of this preliminary work, the parents became definitely "sold" to diphtheria immunization.

The technique for administering the toxin-antitoxin proved very simple, and conformed to strict asepsis. The treatments were given at the schools to avoid keeping children out of the classrooms longer than necessary.

The necessary equipment was set up on a table in a small room. The syringe and needles were sterilized and cooled, and placed on sterile towels. The water in the heater was kept boiling, and the needles were changed and sterilized for each child.

The children assembled in the hall by classes and were brought into the room one or two at a time. This avoids upsetting a whole group if one child happens to cry. A small spot on the upper arm was painted with iodine, one c. c. of the toxin-antitoxin was given subcutaneously, a little pressure applied with sterile cotton on the site of the injection, and the child was allowed to return to the classroom. The treatment is given in alternating arms for three weeks.

It has seldom been necessary to keep the children out of the classroom more than fifteen or twenty minutes. Most of them act as though they rather enjoyed the experience, and few of them are much disturbed if the physician and nurse approach them in an encouraging manner. Nearly all the children continue in school uninterrupted and seldom stay home for a slight indisposition.

It is brought out that if health officers and school physicians in all communities would make serious efforts to interest parents in diphtheria prevention and offer free immunization to younger groups of children, diphtheria might be eradicated in a few years.

### SICKNESS AMONG A GROUP OF SCHOOL CHILDREN IN HAGARSTOWN, MD.

During the period from December, 1921, to May, 1923, the United States Public Health Service conducted a study of illness among school children in Hagarstown, Md. Again during the school term, 1923-24, the Service conducted a similar study in order to determine the incidence of illness during a full school year. The results are interesting in that they give a very clear picture of illness in a typical community.

In the latest study, 5,021 white children were under observation. It was found that the case rates for different diseases and disorders are

THE construction of these Ambler Asbestos Schools, is all that can be desired, they are very much sturdier and stronger than the average portable school. We use 2" x 8" joists, instead of the 2" x 6", that are generally used in the low priced wooden portable school building. All the floors are double; while the walls of the buildings are of four thicknesses of materials, *with an air space between*, this giving you a warm school in winter.

Our Ambler Asbestos Schools are protected on the exterior walls, with Fireproof Ambler Asbestos Sheets; the roof is protected with Fireproof Ambler Asbestos Shingles; while all the interior walls, partitions and ceilings are covered with Fireproof Ambler Asbestos Sheathing, a pleasing

fairly constant in the latest study, as well as in the former study. The common cold stands out prominently as the most frequent cause of illness among school children, with headaches second, and digestive disorders third. The common cold is two to three times as great a cause of illness as the other two most frequent causes. Tonsillitis and sore throat are almost as large a cause of illness as digestive disorders. The respiratory illnesses, while they occur less frequently than headaches, etc., are a serious cause because they involve long continued periods of absence.

The greatest amount of illness occurred in January and the least occurred in September. It was found that for about 5,000 children approximately \$9,500 was spent for operation and maintenance when children were sick and unable to attend school. About \$4,800 of this amount is chargeable to the respiratory diseases, \$1,700 to the common communicable diseases, and \$3,000 to the other causes of illness. The report of the Health Service makes this interesting observation:

"Fortunately, every absence does not mean a loss that can never be recovered. An average child probably makes up most of the work lost during short absences, and over-average children probably experience little difficulty in 'catching up' in their work after even relatively long absences. But such 'catching up' may not be complete; a child who would be excellent in his studies if he attended school regularly may be only fair or even poor in school work because of absence on account of sickness or other causes. In still other cases the child may be absent so much that he has to repeat the grade the next year.

"It would seem that a good measure of the financial loss to the school district on account of sickness would be the number of years children repeat grades because of time lost from school during illness, since the repetition means that the child must be taught again the things he should have learned the first year."

### "SECURING THE PARENT'S CONSENT"

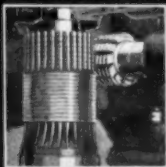
In Mansfield, Ohio, school officials keep a continuous record of the student's health by a complete physical examination each year. Through this method, various forms of diseases are disclosed early in the child's life, permitting medical attention which will enable the student to

(Continued on Page 100)



# VUL-COT

Genuine VUL-COT baskets are made of National Vulcanized Fibre—the material with a million uses! Tougher than horn, lighter than aluminum. It can be sawed, bored, drilled, tapped, threaded, milled, turned, bent and formed. It will not dent, crack, split, break or splinter. . . . Illustration shows how silent gears are made of National Vulcanized Fibre.



New York's biggest banking institution has specified VUL-COT throughout the entire office. America's newest hotel has VUL-COT in every room. The world's greatest railroad has VUL-COT over the entire system. VUL-COT—it is the standard wastebasket in nearly every business organization in America!

VUL-COT will not dent or rust; cannot

scratch fine furniture. Standard colors maroon brown and olive green; also in oak, walnut and mahogany to match your furniture, and permanent Duco-white for bathroom, lavatory, kitchen.

If your stationer or office supply store cannot supply you with genuine VUL-COT guaranteed five years, we will tell you where it can be obtained.

National Vulcanized Fibre Co., Wilmington, Delaware.



# How to keep your buildings fit

The suggestions for reducing maintenance costs that are made on this page represent the proved experience of hundreds of well-known schools all over the country.

**Floors**—You seldom see that concrete floors are wearing until the actual need for repairs is close at hand. The first outward sign of floor wear is silicate dust—dust that fills the air and damages lungs, clothing, and equipment. Holes, hollows, cracks and worn patches quickly follow in its wake, and then you have some repairing to do or a new floor to lay.

If you treat your floors with Lapidolith, the liquid chemical floor hardener, however, they will remain permanently dustproof and wear-proof.

Lapidolith penetrates the concrete and by chemical action changes the loose, coarse-grained particles to a fine, even, close-grained substance of crystalline formation. This substance is flint-like in its hardness. It needs no further attention for years, no matter what kind of wear it gets. Lapidolith is simple to apply. It can be flushed on either a new or an old floor, and if it is applied at night the job is complete by morning.

If your floors are of wood, do not bother with messy floor oils that merely lay the dust and have to be applied again and again. If you would

really prevent floors from rotting, splintering, and drying out, treat them with Lignophol, the preservative dressing that restores the natural oil and gum of the wood. Lignophol is non-inflammable; one application lasts for many years and keeps floors smooth, hard, and sanitary.

**Painted Surfaces**—Painting is one job you can't be rid of entirely, but interiors and exteriors require painting less often where Cemcoat is used. This gloss, eggshell, or flat enamel paint stays white long after other paints yellow with age. A Cemcoat interior is bright and cheerful. It can be washed over and over again, and each time the paint underneath shines forth as bright and clean as when it was applied. Cemcoat does not crack or peel, even on a brick, plaster, or concrete wall. It takes its name from the fact that it adheres tightly to these materials. It is made in white and colors for both interiors and exteriors.

**Roofs**—If a roof is old and worn you need not stand the expense of reroofing. Just brush on a coat of Stormtight, the thick, elastic, adhesive coating that makes an old roof as good as new.

Again and again Stormtight has saved schools the expense of laying a new roof.

Not only that, but it will stop a small leak quickly and permanently—and very often one tiny leak can cause a lot of damage. Stormtight can be applied by anyone over any roofing material. It is made in semi-liquid and plastic form, and is packed in containers holding one gallon to a barrel.

**Exterior Walls**—Does the interior of your buildings become damp in wet weather? Does water seep through the walls whenever it rains hard? Then you should apply Hydrocide Colorless to the outside of your building.

This perfect waterproofing material penetrates the brick. It contains no paraffin and so does not run in hot weather; it collects no dust; it can be painted very easily; and best of all its presence cannot be detected on a wall. If you would have warm dry interiors and preserve the natural beauty of your walls, apply Hydrocide Colorless.

Send for literature and demonstration sample on any of the above products that interest you.

## L. Sonneborn Sons, Inc.

114 Fifth Avenue

New York City

(Continued from Page 98)

be more efficient in his school work.

These examinations are optional to the parent, and not compulsory under any state law. Permission slips are distributed in the schools and those returning the paper signed by the parent, are given complete medical examinations. This year, slips were handed out by teachers just before lunch on a Monday morning. At 9:45 Wednesday morning, the first school, with 223 students enrolled, reported one hundred per cent of the slips signed and returned. At 1:03 that afternoon a second school reported one hundred per cent.

Reports Thursday, revealed six schools with perfect scores, every permit being signed and returned. A seventh school reported 97 per cent, expecting to go over the top at any minute, while the remaining schools were reporting figures indicating that their buildings would also report one hundred per cent.

"Some years ago such a showing could not have been secured, but the people have become educated in the subject of school health. It was a case of the children influencing the parents. Those things can always be worked if they are worked in the right way." This is what H. H. Helter, superintendent of the Mansfield public schools, stated when he was asked how these records were attained.

In putting it up to the student, school officials have adopted methods which make it a contest, and every student uses his utmost influence to place his school in first place. The first school to report one hundred per cent used huge thermometers in each room. Placing these in service at noon Monday, children were asked to return permits promptly so they could be registered. At evening, four thermometers were "boiling over," each with one hundred per cent. Less than two days were required to boost the colored markers to the top of each of the ten thermometers.

The second school had an entirely different plan, and its use gave the students a thrill, marked with keen competition among the various rooms. A miniature race track was constructed, complete in every detail from automobiles to Red Cross tent. A car was entered in the race for each room of the building. The track, eight and four feet in length and width, was built with a grass plot in the center where

natural flowers grew to make it more attractive. A filling station and a grandstand, the latter filled with spectators, were also modeled. The entire race track was placed in a prominent place in the lower corridor.

Distributing permit slips at noon opened the race, each room having a special car in the contest. Wednesday morning it was found the cars were racing 99.31 miles per hour. At noon, the entire school was on edge, figuratively speaking, as the cars attained the speed of 99.47 miles per hour. Only a few more permits were needed.

At 1:03, the last slip was returned and the second school reported over the top. In other buildings, clocks and other forms of registers were used with very good success.

Where Mansfield has used this method in securing permission for physical examinations, other schools will no doubt find it equally as good for other school matters where parental permission is required.

### THE SCHOOL NURSE IN MASSACHUSETTS

—Practically every school child in Massachusetts benefits by the school nursing service which has been introduced. The United States bureau of education says: "Until the advent of the school nurse, health programs in rural Massachusetts were inadequate. In many towns medical inspection was the only feature. Eighty towns of less than 5000 population have been conducting dental clinics for one or more years. Some had traveling clinics operating under the auspices of farm bureaus, while others were conducted in cooperation with municipal authorities, nursing associations or branches of the American Red Cross.

"Since the enactment of legislation requiring the employment of school nurses in all towns, improvement has been marked. The nurse helps the school physician with the annual physical examination and makes independent inspection of pupils and buildings. She visits the homes of pupils and confers with parents in regard to health problems. A recent investigation shows that fully 99 per cent of the pupils attending public schools in Massachusetts are receiving the benefit of school nursing service."

### HYGIENE AND SANITATION

—Hoboken, N. J. Through the cooperation of Dr. Joseph Schapiro, school physician, and the board of education, plans have been made for the opening of a clinic for pre-school age chil-

dren. Under the plan, children from one to five years will be brought to the clinic for examination and suitable treatment recommended. All cases are recommended to the family physician for treatment.

—Alliance, O. The Schick test was recently given in the public schools with the aid of city and school medical authorities and state physicians. Each physician handled eight hundred children and the work was completed in a very brief time.

—Toxin-antitoxin treatment for the immunization of children against diphtheria was approved recently by the board of education of Ionia, Mich. A room in one of the schools was assigned for clinical purposes and for the administration of the treatment.

—Following a goiter survey of school children of Fergus County, Montana, a supply of 100,000 iodine tablets has been secured. The tablets will be given, under medical direction, to children whose parents give their consent.

—The board of education of Billings, Mont., has approved plans for the introduction of the iodine treatment for goiter in the city schools. The treatment was begun in the sixth grade and will continue through the high school.

—New Philadelphia, O. The school board has named a committee of three physicians, who will recommend a treatment for goiter with which a large percentage of the school children are afflicted. The action followed a recent report to the chamber of commerce by Supt. C. A. McVay.

—Pawtucket, R. I. The school board has approved a recommendation of school physicians providing for Schick treatments for diphtheria. A slip signed by the parents of a child entitles him or her to treatment under the supervision of experts of the state board of health.

—Fostoria, O. The school board has taken steps to combat the prevalence of goiter among school children. Fostoria is located in the goiter district and there are about 600 children afflicted with the ailment. The health department has advised that all children avail themselves of the treatment.

—Newark, N. J. A public inspection was recently held of the school classes for children confined to the city hospital. The classes were started several months ago and are intended for children able to leave their beds. A teacher

(Concluded on Page 103)



*One room schoolhouse of the new American construction*

## Your Over-Crowded Children Deserve The Beauty, Comfort and Convenience of American Semi-Permanent School Houses

Where it is necessary to make temporary provision for housing the over-flow, or where conditions make the expense of permanent buildings prohibitive, these improved buildings, attractive in design, will satisfy every requirement.

They are economical, both in first cost and in upkeep—easily put together, as they are shipped to you in sections, and they can be quickly taken down and moved to other locations when necessary.

They are convenient in arrangement and ornamental in appearance. They do not look like "make-shifts" and pupils, patrons and teachers will all approve of them.

These handsome buildings can be secured in almost any size and number of rooms,—one, two, three, four and six room units, with a variety of arrangements being available.

Buildings are furnished with either gable roof or flat roof construction as shown.

Let us know the number of units, size and number of rooms, and any other information about your requirements, and we will quote you prices and suggest the most economical and practical way of meeting your needs.

Also manufacture portable gymnasiums and portable bleachers.

*Write for handsome, illustrated catalogue giving details about these buildings.*

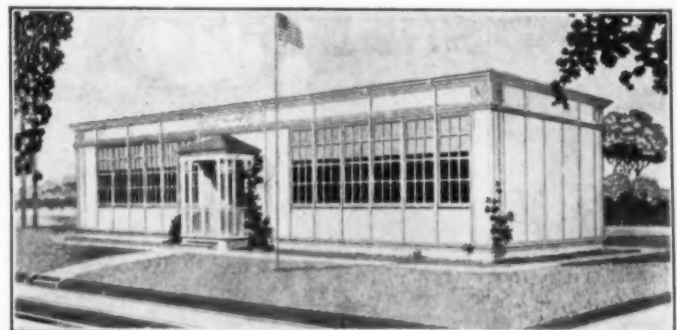
Send your request to the factory or to the nearest of our representatives listed below

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| The Educational Supply Co.,<br>124 South State Street,<br>Painesville, Ohio       | T. R. Woodburn Company,<br>Terre Haute, Indiana<br>Henry Wiggs, District Manager,<br>Two Rector St., New York City, N. Y. |

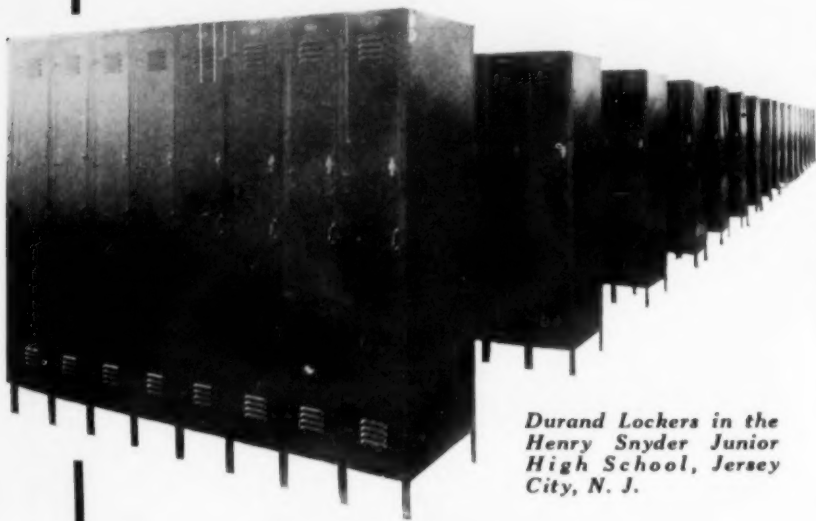
### AMERICAN PORTABLE HOUSE CO.

601 Alaska St.  
Seattle, Wash.



*American "Semi-Permanent" two room building*





*Durand Lockers in the  
Henry Snyder Junior  
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City, N. J.*

## Laying Out Lockers for Savings

**I**N every locker installation there are many questions to be answered, such as, "Do we need single or double tier Lockers?" "Will there be crowding at any point?" "Should combination, rim-key or padlocks be furnished?" "Will this layout handle a peak load without crowding?"

That is where the many years of locker experience of the Durand Steel Locker Company steps in to lend a helping hand. Durand engineers have no doubt met and solved many problems that are quite similar to yours. The layouts that they provide are based on experience and the lockers that they recommend have proven to be the most desirable under similar circumstances.

You incur no obligation by sending in the plans of your available locker space with the notations of the problems involved. Durand engineers will provide a practical working layout for the space, together with recommendations as to the type of locker best suited to meet your particular needs.

### DURAND STEEL LOCKER CO.

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| 1501 Ft. Dearborn Bank Bldg.,<br>Chicago  | 2415 First Nat'l Bank Bldg.,<br>Pittsburgh |
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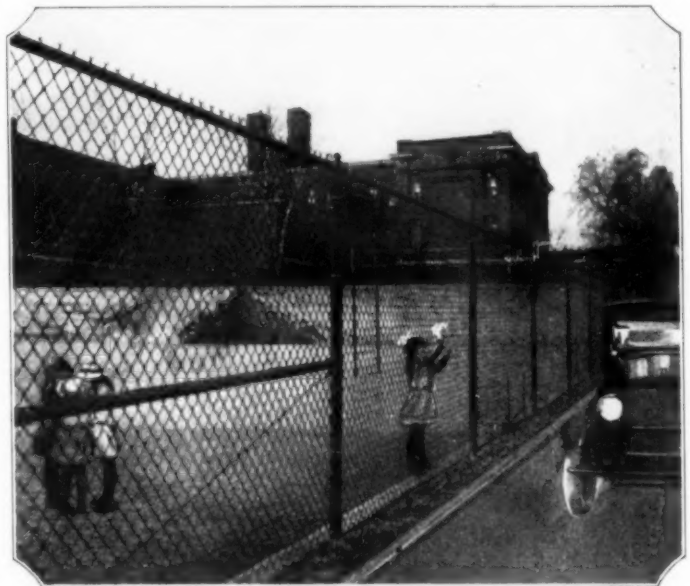
**DURAND**  
LOCKERS STEEL SHELVING  
BINS RACKS

## Safety of Pupils and Property demands Page Protection

Page Fence is rapidly becoming standard equipment in well managed school and playground systems.

The high, non-climbable fabric keeps children within bounds, safe from traffic dangers—prevents pupils from wandering about the neighborhood during play periods—insures prompt return to class. Teachers and school authorities are relieved—parents more apt to give credit for a well organized administration of schools.

And *property* is protected—day and night the year round. PAGE bars the vandal—enables proper development of lawn and grounds—increases the beauty and value of school property.



### PAGE the Most Economical Fence

Cost *per year* is the true cost of school fence. The Page Super-Heavy Zinc Coat, applied after weaving, approximately 5 times heavier than that on an ordinary fence, assures rust-resistance—long life—protection at its lowest cost per year.

Plan now for this better protection for your schools. Send for complete information—for the name of a Distributor near you who will furnish plans and estimates promptly. The Page Fence Book, an illustrated treatise on property protection, shows typical installations. Mailed promptly—without obligation. Address:

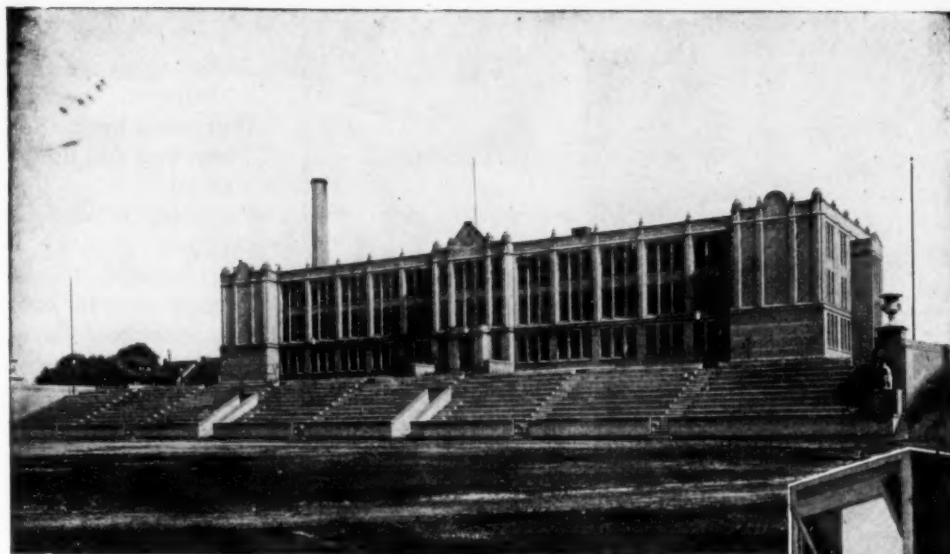
**The Page Fence & Wire Products Ass'n.  
215 N. Michigan Ave., Chicago, Ill.**

Distributing wire link products of the Page Steel & Wire Co., associate company of the American Chain Co., Bridgeport, Conn.



**PAGE**  
PROTECTION FENCE

## The "Williams" Reversible Window Fixtures



Lehman School, Canton, Ohio. Thayer & Johnson, Architects, Cleveland, O., and New Castle, Pa.

### The Williams Plank Frame Reversible Window Equipment Provides:

*Ideal overhead ventilation  
Reversibility for inside cleaning  
Greater light area  
More weathertight construction  
Better shading facilities  
Simplified frame construction  
Weightless windows*



Eight years ago the Williams Reversible Window Equipment was first installed in the Canton, Ohio, public schools. Today this equipment is to be found in six buildings including McKinley High, one of the largest schools in the state. That this equipment has given satisfaction is attested by the fact that in the large building program now going on in Canton, the Williams Equipment is receiving a prominent place in the Architects' specifications.

This continued use of our equipment can be traced to its careful manufacture and installation. Both in the shop and in the field of installation this work is done by men, many of whom have been with us from ten to fifteen years.

**THE WILLIAMS PIVOT SASH CO.**  
East 37th St. at Perkins, Cleveland, Ohio

(Concluded from Page 100)

is regularly employed for these classes by the board of education.

—There is urgent need in schools for 25 times as many sight-saving classes—special classes for children with defective vision, according to Lewis H. Carris, managing director of the National Committee for the Prevention of Blindness. There are at least 50,000 children with such seriously defective vision that they are unable to keep up with the work of normal children. There are at present 200 sight-saving classes scattered about the country, whereas approximately 5,000 such classes are needed. There is need at the present time for one sight-saving class in every group of 5,000 school children.

—A miniature model of a five-acre playground for city children has been constructed for the Children's Bureau of the U. S. Department of Labor for exhibition at the International Council of Women, meeting in Washington this spring. The model is an exact reproduction of a playground adequately equipped for daily use by approximately 300 boys and girls. It contains a miniature swimming pool, a shelter house, and all the necessary equipment, with tiny figures of children engaged in the various sports of the playground. The model will be on display at the Children's Bureau in Washington and will be available for loan to child-welfare conferences or exhibitions.

—Macdougall, in reviewing the histories of 370 patients in attendance at the nutritional clinic of the Hospital for Sick Children, Toronto, Canada, gives the causes of malnutrition in the order of their prevalence as follows:

Mismanagement, physical defects, improper diet and faulty food habits, over-fatigue and faulty health habits. Family traits played little or no part. Diseased tonsils and adenoids, and teeth were the main physical defects causing malnutrition. Macdougall urged that each child applying for entrance into a public school, be examined in the presence of the parents, and be required to be up to normal weight before he is allowed to take on the burden of school work.

—The Rice Lake, Wis., board of education invited all the local physicians to a conference, with the result that a health program was agreed upon. Universal vaccination, the iodine

treatment for goiter, dental inspection, the Dick serum for scarlet fever prevention, and the Schick test and antitoxin treatment for the prevention of diphtheria are among the measures contemplated.

—Annual examination of school children in Panama and the Canal Zone was begun for the first time last October. The schools now have the services of a full-time nurse and each child is examined, weighed and measured, and referred to specialists for special attention.

—Compulsory insurance of school children has been adopted in the Canton of Geneva, Switzerland, following the establishment of the system within recent years in various Cantons of the country. The law provides for the compulsory insurance against disease and accident of all children from 3 to 15 years of age attending kindergartens or public schools. The fund pays three-fourths of the cost of medical care for the children, and of maintenance in the country where required.

—Bisbee, Ariz. The school board has undertaken a study of the all-year plan of supervision for playgrounds, under the direction of the health department. Several thousand dollars will be invested in playground apparatus and the entire community will benefit from a cooperative movement for supervised recreation.

—In examining the local open air classes, Dr. Curtis, the medical inspector of the Hackensack, N. J., schools, found that 80 per cent of the pupils were affected with enlarged tonsils, which he attributed, in large part, to malnutrition.

—Greenville, Pa. Fifty-one per cent of Greenville's high school girls are afflicted with goiter, varying in degrees of seriousness, according to a recent survey of the school. A number of the girls are facing operations for relief of the growths. State aid will be asked in combatting the epidemic.

—Approximately 12,000 Youngstown, Ohio, school children were given the Schick test to determine how many are immune from diphtheria. Five state physicians cooperated with school authorities in giving the test. Following similar tests made last year, about 8,000 pupils were made immune from this disease. The decrease in diphtheria is shown by records of 1922 with 910 cases, as compared with 202 in 1924. During the same period, deaths dropped from 54 to 17.

—A dental clinic has been established at Rockland, Me., through the cooperation of various municipal and charitable agencies. The clinic has been installed in a local schoolroom, where children unable to pay a dentist may obtain treatment at the small price of twenty-five cents a visit. Educational work will be conducted in all the grades and dentistry practiced in the first three grades and the kindergarten.

—The progress of health work in the New York City schools during 1923 is the subject of a special report, recently published, which states that between 98 and 99 per cent of the children in the public and parochial schools have been vaccinated against smallpox. During 1923 new classes in sight conservation, open air and cardiac work demonstrated their value in raising the standard of health among school children. The report states that practically every tuberculous contact case among children has been reached by the nurses of the department of health in an effort to place these children in open air classes. The number of contagious diseases, it was noted, had decreased twenty-five per cent within the last three years.

—Alliance, O., Feb. 13—Approximately 65 per cent of the Alliance school children given the Schick test for diphtheria were found to be subject to the disease. More than 2400 students were given the test when city, school and state health officials cooperated in the campaign. Over 1700 of these showed positive reaction and were given the diphtheria inoculations.

According to the school records, immunity was the highest among foreign students. In schools where there was a large enrollment of foreign children, few positive readings were made. When American children were tested, the opposite was found.

In Ohio, the state department furnishes a physician for the test. The state and city shares expenses for the test fluid and inoculation in Alliance. The test required three days and the inoculations two and a half days each. Three inoculations were given each child showing a positive reading.

#### A NEW HEALTH RECORD FORM

A new four-page form and record for recording health and growth of children for a six year period has been prepared by Dr. Thomas D. Wood and Dr. Hugh Grant Rowell of Teachers



**B**



*Standard L.B. school library  
equipment in quartered oak*

- Card catalog cases
- Charging desks
- Reading tables and chairs
- Unit wood book-shelving, wall and double-faced
- Periodical racks
- Dictionary stands
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**Bureau equipment will gladly attest that the most exhaustive search can disclose nothing so suitable, practical and durable.**

Write today to the nearest library division listed below. Our representative—an expert on school library practice—will gladly discuss your problems. This involves no obligation on your part.

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**Steel bookstack**  
**Museum cases**

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McKee & Wentworth  
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*Salesrooms in leading cities in the United States, Great Britain and France*

### School library supplies

Administrative school records and files for superintendents, principals, department heads, secretaries, etc.

*Write for book No. 814  
"School libraries"*

Filing size of the Health and Growth Record is 8 by 5 inches, or 5 by 8 inches, depending upon filing the form on the side or on the end.

### HEIGHT-WEIGHT CHART

[illegible]

**DIRECTIONS**

For HEIGHT-WEIGHT CHART (above): Obtain the standard weight for each child from the Baldwin-Weber Height-Weight-Age Tables. Opposite V or V<sub>2</sub>, mark the indicated per cent of weight to be gained or lost.

For WEIGHT CURVE (page 1): One space = one pound. Enter either (1) child's actual weight or the standard weight, whichever is lower, for the points marked Low Point on the chart; (2) the standard weight for the child's age for the points marked High Point on the chart; and (3) the child's actual weight for the points marked Gain or Loss. Enter the child's actual weight each month (8-September, 12-October, etc.). Plot his normal weight only when height is charted. In plotting, place dots in the middle of each space. Connect adjacent dots to form a graph.

HEALTH AND GROWTH RECORD (Woodhull)

NAME **HOLLY, WILLIAM** SEX **MALE** AGE **10** MONTHS

WEIGHT CURVE

DATE **10-1-50**

WEIGHT (pounds)

TIME (months)

150  
140  
130  
120  
110  
100  
90  
80  
70  
60  
50  
40  
30  
20  
10  
0

20  
18  
16  
14  
12  
10  
8  
6  
4  
2  
0

Expected weight gain

Actual weight gain

100 110 120 130 140 150

0 2 4 6 8 10 12 14 16 18 20

100

name pleury, William John born at New June 24 1918

| Date                    | 19 22 1922 |      |      |      | 23 24 25 26 |      |      |      | 27 28 29 30 |      |      |      | Follow up |
|-------------------------|------------|------|------|------|-------------|------|------|------|-------------|------|------|------|-----------|
|                         | h          | h    | h    | h    | h           | h    | h    | h    | h           | h    | h    | h    |           |
| Grade                   | 24         | 25   | 26   | 27   | 28          | 29   | 30   | 31   | 32          | 33   | 34   | 35   | Eyes      |
| Age                     | 3.7        | 4.4  | 5.4  | 6.2  | 6.5         | 7.0  | 7.5  | 8.0  | 8.5         | 9.0  | 9.5  | 10.0 | Viol      |
| Weight                  | 35.5       | 36.2 | 36.5 | 36.6 | 36.7        | 36.8 | 36.9 | 37.0 | 37.1        | 37.2 | 37.3 | 37.4 | Het       |
| Setting                 | 36.4       | 36.5 | 36.6 | 36.7 | 36.8        | 36.9 | 37.0 | 37.1 | 37.2        | 37.3 | 37.4 | 37.5 | Schick    |
| Birth Chart full eye    | 22.0       | 22.0 | 22.0 | 22.0 | 22.0        | 22.0 | 22.0 | 22.0 | 22.0        | 22.0 | 22.0 | 22.0 |           |
| Long exposure           | 22.0       | 22.0 | 22.0 | 22.0 | 22.0        | 22.0 | 22.0 | 22.0 | 22.0        | 22.0 | 22.0 | 22.0 |           |
| Strength, right forearm | 10         | 19   | 18   | 20   | 20          | 20   | 20   | 20   | 20          | 20   | 20   | 20   |           |
| Left                    | 10         | 18   | 18   | 20   | 20          | 20   | 20   | 20   | 20          | 20   | 20   | 20   |           |
| Hearing, right ear      | 7.5        | 7.5  | 7.5  | 7.5  | 7.5         | 7.5  | 7.5  | 7.5  | 7.5         | 7.5  | 7.5  | 7.5  |           |
| Left                    | 7.5        | 7.5  | 7.5  | 7.5  | 7.5         | 7.5  | 7.5  | 7.5  | 7.5         | 7.5  | 7.5  | 7.5  |           |
| Vision, right eye       | 1.0        | 1.0  | 1.0  | 1.0  | 1.0         | 1.0  | 1.0  | 1.0  | 1.0         | 1.0  | 1.0  | 1.0  |           |
| Left                    | 1.0        | 1.0  | 1.0  | 1.0  | 1.0         | 1.0  | 1.0  | 1.0  | 1.0         | 1.0  | 1.0  | 1.0  |           |
| Stigmata, R. I. N       |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Vision with glasses, R  |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          | 80         | 80   | 80   | 80   | 80          | 80   | 80   | 80   | 80          | 80   | 80   | 80   |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    | 81         | 81   | 81   | 81   | 81          | 81   | 81   | 81   | 81          | 81   | 81   | 81   |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Tooth, rarer            |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Right                   |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Condition, right eye    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Left                    |            |      |      |      |             |      |      |      |             |      |      |      |           |
| Speech defects          |            |      |      |      |             |      |      |      |             |      |      |      |           |

6602 磁敏電壓表

22641 - Hopper, Mary Elizabeth

|                    | 1922   | 1922 | 1923 | 1924 | 19 |              |
|--------------------|--|------|------|------|----|--------------|
| None               | 1  | 1    | 1    | 1    |    | Follow bones |
| Throat             | 1  | 1    | 1    | 1    |    | Pr. os.      |
| Adonidia           | 1  | 1    | 1    | 1    |    | Abd.         |
| Tonsils            | 1  | 1    | 1    | 1    |    |              |
| Glands, cervical   | 1  | 1    | 1    | 1    |    |              |
| Hyoid              | 1  | 1    | 1    | 1    |    |              |
| Lungs              | 1  | 1    | 1    | 1    |    |              |
| Heart, rate        | 124  | 120  | 116  | 112  |    |              |
| " condition        | 1  | 1    | 1    | 1    |    |              |
| Norma              | 10   | 10   | 10   | 10   |    |              |
| Sex, maturation    | 1  | 1    | 1    | 1    |    |              |
| operation          | 10   | 10   | 10   | 10   |    |              |
| Skis               | 1  | 1    | 1    | 1    |    |              |
| Posture            | 1  | 1    | 1    | 1    |    |              |
| Shoulders          | 1  | 1    | 1    | 1    |    |              |
| Abdomen            | 1  | 1    | 1    | 1    |    |              |
| Spine              | 1  | 1    | 1    | 1    |    |              |
| Feet, right        | 1  | 1    | 1    | 1    |    |              |
| left               | 1  | 1    | 1    | 1    |    |              |
| Nervous condition  | 1  | 1    | 1    | 1    |    |              |
| General            | 1  | 1    | 1    | 1    |    |              |
| Inspection, height | 1  | 1    | 1    | 1    |    |              |
| " weight           | 25.5   | 21.2 | 27.6 | 23.4 |    |              |
| Adel               | 1  | 1    | 1    | 1    |    |              |
| Present at exam    | 1  | 1    | 1    | 1    |    |              |
| Notes              | <p>(3), (4) + glands size of 1/2 pea, both angles</p> <p>(2) Features practically normal. (3), (4),</p> <p>(4) Slight depression along upper border of ribs beginning at breast bone and working back. Breast bone sl. prom.</p> |      |      |      |    |              |

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It is a pleasure to receive many letters similar to one from a Board of Education of an Illinois school, from which we quote this paragraph:

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No. 1949

#### DOUBLE MANUAL TRAINING BENCH

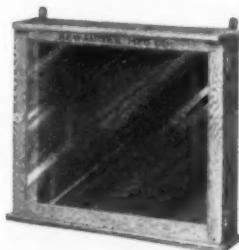
Ideal for the conservation of floor space, as it accommodates 12 students. Very sturdily built and has an unusually fine appearance.



No. 14223

#### COMBINATION PHYSICS AND CHEMISTRY TABLE

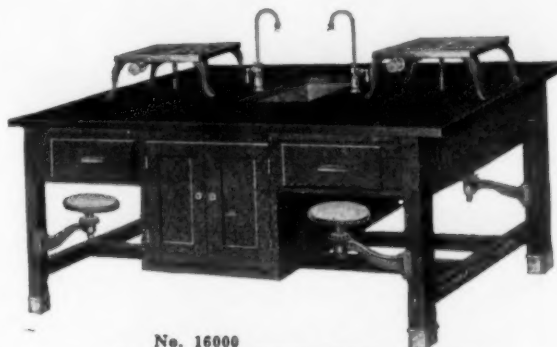
This design is practical for use as a student's desk or in a private laboratory. Has two larger and eight smaller drawers and four cupboards. Very solidly constructed and finely finished.



No. 1514

#### BULLETIN BOARD

with door. For posting special reports, notices of meetings, etc.



No. 16000

#### DOMESTIC SCIENCE GROUP TABLE

This table is a very desirable addition to the Domestic Science Equipment. It embraces every feature that is necessary in a Domestic Science Table. Will accommodate four students at one time.



No. 1006

#### STUDENTS' BIOLOGY LABORATORY TABLE

Where a complete work-table is desired, this will fill the need admirably.



No. 14354

#### Supply Case

A very practical case. The two sliding Hyloplate doors make a very fine blackboard.



No. 1302

#### ELECTRICAL DESK

Accommodates 8 students working in sections of four. Each student has one small drawer exclusively. The top tier of drawers and the cupboards are used in common. A two-gang set of Hubbell polarized plugs and receptacles is placed at each end of desk.



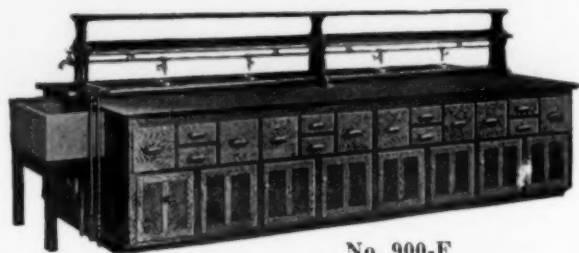
No. 8020

#### CHEMICAL DESK

This design contains two features not to be overlooked. The electric light attachments are new. The small drawers extending through the entire table provide storage room for long condensing tubes and other equipment. This desk will accommodate twenty-four students working in groups of eight.



# Peterson Laboratory Furniture



No. 900-F

Students' Chemistry Laboratory Table—arranged to accommodate 16 students working in sections of 8. It is equipped with 4 drain cups, including drain pipe and sink at end. All plumbing is exposed and furnished complete to the floor line.



No. 1412

Students' Domestic Science Table—has proven itself very popular because of the flush top stove which brings the utensils of the student down to the same level as a regular stove, and at a height where they can be watched.

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Confidence, after all, is the foundation of every business transaction.

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Norman, Okla.

### ADMINISTRATION NOTES

—Rochester, Pa. The work in individual instruction has been extended this year to the fourth grade, as well as some departments in the high school. The teaching staff has become thoroughly appreciative of the results of the work and are loyal supporters.

—The New York City board of education has decreed that whenever pupils are transferred from one school to another, that the reasons for same be given to the parents.

—A bill passed by the California assembly amends the part-time school law and requires that persons subject to the law living not more than three miles from suitable transportation be assigned to part-time classes.

—It cost an average of \$41.03 per pupil to transport children to and from school in districts providing free transportation in Washington last year, according to State Supt. Josephine C. Preston. The questionnaire sent to school districts of the state, elicited replies from 461 which spent \$813,228, or 82 per cent of the total amount expended in children's transportation. Of the districts replying, 430 or all but 31, declared the transportation plan a success. There were 984 routes, averaging six miles each; of these, 518 were fair roads and 370 good roads. Based on figures compiled by the state department, it is estimated that 24,000 children are transported daily from their homes to the school.

—A program of safety first is to be adopted by Columbiana county (Ohio) schools in protecting school children from traffic accidents. Sponsored by the county automobile club, school officials plan to approve of the school-boy patrol system to protect crossings during the busy hours each day when hundreds of children are going to and from school. It is planned to adopt this system in all parts of the county where no traffic cops are maintained by the city.

—Rev. J. O. Farrott, vice-president of the board of education at Mobridge, S. D., has recently completed an interesting study of salaries in 23 of the larger school systems of South Dakota. A report on the results of the study will be made in the near future.

—The Sacramento school system was one of the first in the United States to recognize the value of supervised study in the grades. During the past twelve years all study subjects have had regular periods devoted to them under

the supervision of teachers. Greater efficiency has been attained in this way, for the pupil who learns quickly often retains poorly, while the plodding pupil needs encouragement and attention. With supervised study both of these are watched and assisted. Sacramento believes that study is more important than reciting, and the results of supervised study have justified the belief.

—A survey of the school system of Bisbee, Ariz., was recently completed under the direction of Dr. N. L. Engelhardt, of Teachers College, Columbia University.

In making his report to the board, Dr. Engelhardt recommended the consolidation of the junior high schools and the housing of both the junior and senior high schools in the high school building.

The school board in adopting the report of Dr. Engelhardt, has taken steps toward the reorganization of the school system, with the idea of eliminating eight small schools and establishing larger units in the interest of better grading and higher efficiency.

—New Mexico does not take kindly to the free textbook idea. The School Review of that state sent a questionnaire to a large number of representative schoolmen and women in the state inviting their opinion on the subject, and then reports: "The response was thoroughly disheartening. Whatever the cause—whether timidity, indifference, or lack of opinion—at any rate, the great majority of the questionnaires were neither answered nor acknowledged."

—Three years ago the Paterson, N. J., board of education abandoned the co-educational system in the high school. Recently by a vote of seven to two the board reinstated the system. Superintendent Wilson in advocating co-education said: "Men and women live together, and I believe boys and girls should grow up together."

### RULES AND REGULATIONS

—The schools of Schenectady, N. Y., have been so much annoyed by vandalism that police protection has been invited. The throwing of stones, breaking schoolhouse windows, has become a popular practice among boys who loaf about at night. The Schenectady Star in commenting on the situation says: "While only two or three schools are mentioned as centers where the worst depredations are committed, this list by no means exhausts the list of places

where a fine crop of young loafers is being developed. Street corners are good breeding places for crime. The beginning of contempt for law is here. It is not something to be lightly dismissed, as it used to be by the former police chief, with a wave of the hand and the remark that 'boys will be boys.' Boys will be the lawless element if they are unrestrained and undisciplined."

—The Schenectady, N. Y., board of education has barred promiscuous solicitations for charity in the schools. The Schenectady Star in commenting on the action says: "It is not all because teachers are loaded down with a mass of duties that have little relation to education when they already have enough to do, it is because there results lack of thoroughness when so many and so diverse activities are attempted. Men who hire boys find them less well grounded in the fundamental processes, they are less able to spell and write and calculate with accuracy and legibility, they are less able to get down to the basic principles of a job, they show less concentration and less reliability than under a simpler school system when 'drill' used to take the place of so much experimenting with new methods."

—The penny lunch rooms as conducted in the Chicago schools are by order of the board of education to be reorganized and simplified. Hereafter the attendants will handle no money. Tokens will be used. Money will be handled through the principal's office only. The length of day for attendants will be seven hours. The pay for head attendants will be fifty cents an hour, and for attendants forty cents an hour.

—The board of education of Ponca City, Oklahoma, has ruled that students getting married can no longer attend the high school. This rule was issued in anticipation of several marriages now planned.

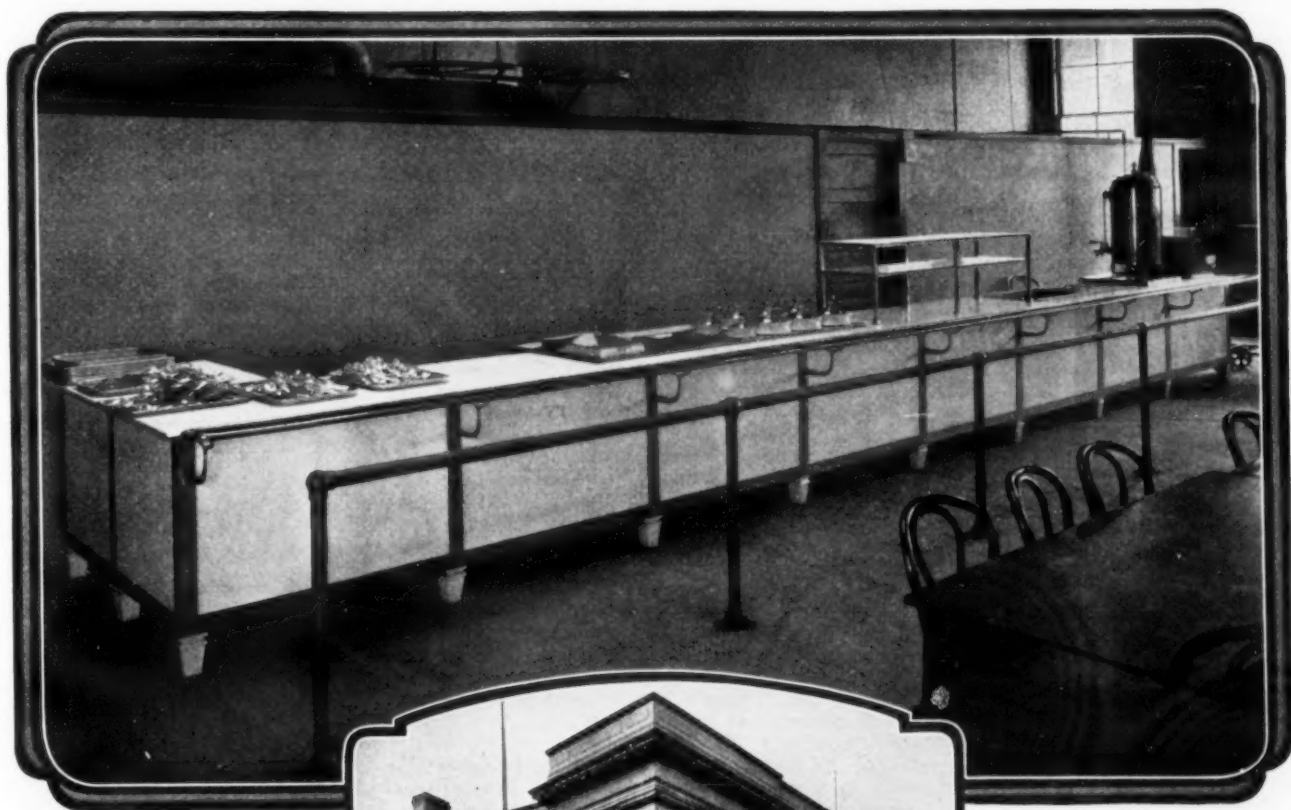
—A code of professional ethics has recently been adopted by the New Jersey State Teachers' Association in which the term "teacher" includes all persons engaged in educational work, whether in executive, supervisory or teaching capacity. The code outlines the three main purposes and gives the ethical relations which should govern the profession at large, the immediate professional associates, the board of education, the parents and pupils, the community and those interested commercially.

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## Washington Correspondence

A. C. Monahan, Formerly U. S. Bureau of Education

### HIGH SCHOOL FRATERNITIES

The District of Columbia school board finds itself at the present time the center of a controversy over the question of high school fraternities and sororities. The regulations of the board do not prohibit such organizations in the District schools, but they prohibit boys or girls who belong to any of them from representing their schools in any extra curricular activities. This prohibits fraternity and sorority members from positions on the editorial staffs of school publications, from taking part in public dramatics, debates, and entertainments, and from athletics in inter-school contests, and from holding commissions as officers in the military organization. Each student in all high schools is required to file a statement at the beginning of each year to the effect that he does or does not belong to any school fraternities or sororities. The statement is on a special printed form and is countersigned by parent or guardian.

The present situation is the result of recent information coming to the surface that several pupils holding offices and honors of various sorts belong to fraternities in spite of their signed statements. An investigation has followed which shows the number to be quite large, and that the signed statements have been taken quite lightly by the pupils. The result has been the disqualifying of boys and girls from positions held as class officers, cadet officers, on athletic teams and in other positions. The board has given the whole question reconsideration and proposes to stand on its present ground, two members of the nine dissenting. The pupils have enlisted the assistance of graduate members of their fraternities, and in some cases their parents, and propose to make a legal fight. Money for the purpose is being raised and to make a test case one fraternity is now asking the District Supreme Court to enjoin the school board from enforcing its rule.

The high school sorority question has been a troublesome one in many sections of the country and considerable state legislation has been enacted to regulate or prohibit their establishment. Seventeen states now prohibit their organization in public schools and a few others specifically authorize local school board to make such a prohibition if they desire to do so. States with such legislation include California, Colorado, Illinois, Indiana, Iowa, Kansas, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Montana, Nebraska, New Jersey, Ohio, Oklahoma, Oregon, Vermont, and Washington.

The prohibition legislation usually applies to elementary and secondary public schools, but in some cases to all state educational institutions. The acts usually make it unlawful for a pupil to belong to any fraternity made up wholly or partially by pupils of a school, and often designate suspension or expulsion from school as the penalty for violation of the law. In several instances the laws designate "public school fraternities, sororities and secret societies as inimical to the public good."

Among cities in states not having general prohibition laws on high school fraternities which have regulations prohibiting these organizations in high schools might be mentioned Bridgeport and Meriden, Conn., Covington, New Orleans, Kansas City, St. Joseph, Dover (N. H.), McKeesport (Pa.), Wilkes-Barre, Austin (Texas), Portsmouth (Va.), Milwaukee, Racine and Cheyenne.

The authority of school boards to debar fraternities and sororities has been upheld by courts in California, Iowa, Washington, Illinois, Wisconsin, and other states. //

### THE EDUCATIONAL SERVICE OF THE CHAMBER OF COMMERCE OF THE UNITED STATES

The Chamber of Commerce of the United States has just filled a vacancy in the chief of its Education Service by the appointment of Edgar F. Fowler, formerly of Kentucky, but for the past six years a specialist in education in the Educational Recreational Service of the United States Army. Mr. Fowler holds degrees from Lincoln Memorial University and Transylvania University and has taken graduate work at Columbia University. Immediately before going to the War Department he was dean of men and head of the department of political science in the Lincoln Memorial University.

This position was formerly filled by William Mather Lewis, now President of George Washington University.

The Education Service of the Chamber was, in part at least, responsible for a report issued two years ago on the desirability of a Federal Department of Education as proposed by the National Education Association. The report, advising against the establishment of the proposed Department, was signed by all of the members of a special committee appointed by the Chamber to make an investigation, with the exception of two who signed a minority report favoring the Department.

### NATIONAL ORGANIZATION FOR EDUCATION

In the interim between the death of the 68th Congress and the convening of the 69th in December, 1925, a serious attempt is being made by several national education organizations, hitherto holding diverging opinions in regard to the desirability of a Federal Department or to the type of department which should be established, to get together on a program acceptable to all. With this in view, the legislative committees of the National Education Association and of the American Council on Education, and others have held joint conferences. A partial agreement has been reached. It is hoped by the conferees that a full agreement of all educational forces may be secured before Congress convenes so that a bill incorporating the agreement may be prepared and legislation secured. It is certain that such a bill would receive the most serious consideration by Congress and probably would be enacted into law. For six years, the discussion of a Federal Education Department has been constantly before Congress, much discussion for and against certain proposals has been advanced, and much influence for and against bills before Congress has been used. The result is that Congress is ready to act and to satisfy the great national clamor for a department if a way can be found acceptable to the disagreeing elements which is also in every way within the spirit and letter of the Constitution and in keeping with the general program of reorganization of the Government Executive Departments approved by the administration.

The plan on which tentative agreement is now reached is for a separate department of education with a cabinet officer at its head and in which would be united the present various bureaus and offices whose primary work is education. The principal ones are the present United States Bureau of Education, the Federal Board for Vocational Education, Howard University and the Columbia Institute for the Deaf. No increased appropriations for administrative purposes are asked and the proposal makes no provisions for any Federal subsidy to assist the various States support their schools. This feature of past proposals has been the cause of the principal objection of various groups which have constantly opposed such measures as the Sterling-Reed bill because of the subsidy feature.

The present proposal is in line with the administration program, provided the President and Congress will be willing to drop from their present plan the Veterans' Bureau and other soldier relief offices now proposed to include with education in a Department of Education and Relief. One difficulty is the fact that the administration measure was made a plank in the Republican platform at the Cleveland Convention. It is probable, however, that this will not be serious and a way will be found by Congress to provide the separate Department of Education if all educational groups will unite on a single program.

The Department proposed would have no administrative functions except such minor ones as it now holds by the offices it would consolidate. It would be principally a research, investigation, and advisory agency promoting education by the distribution of information acquired by expert authorities and made available where needed. It would be a fact-finding organization concerned with the development of the science of education. State and other administrative offices would use the facts in their own way as needed.

The Educational Record, published by the American Council on Education, in its May number will contain a summary of the functions of the proposed department. It will state:

"As soon as one grasps the significance of the working hypothesis that in a democracy facts control education, the nature of the problem of national organization of education assumes a

totally different aspect. It is then no longer a question of establishing an office with functions like those required for political purposes. The problem becomes one of creating a suitable agency for intelligent collection, classification, and dissemination of facts. The office must also be so manned that it is competent to use discretion in the selection of facts that are both valid and significant for education.

"The requirement that the facts selected by the federal education office be valid and significant makes it difficult, if not impossible, for that office to usurp any unwarranted power over education, because significant facts acquire power in proportion as the number of cases that evidence their validity increases. When an alleged fact is found on trial to be incorrect, its vitality vanishes. Besides, the fact-finding enterprise stimulates cooperation for the common good among many independent agencies without impairing in any way the autonomy of each. This is so obvious that educators are rapidly coming to agree that a properly constituted fact-finding federal office could not if it would either drag education under political control or impair the powers of the indestructible states.

"A second significant conviction that is now universally accepted is that in a democracy schools are but part of the machinery of education. Newspapers, magazines, movies, radio, sports, autos, industry, commerce—all these and many others play vital roles in developing men who are capable of self-government. In the early days of the Republic we had a continent to conquer. The pioneer spirit was essential to survival. Necessary chores helped educate the people and kept them out of mischief. Now this is all changed. The situation is so complex that illuminating facts and reliable information are needed to inspire and guide team play for the common good.

"The task of collecting, classifying and testing all the information that is needed is too large for any local state, or voluntary organization. Each individual group must be active in finding and studying the facts of its own environment. But the significant facts of local life must be united in a national picture, which, by comparing trends and tendencies, would arouse the sporting spirit of local groups to compete for honorable mention for distinguished service in realizing more fully our national ideals."

### Supreme Court Sustains Ranger

The question whether the school board or a financial town meeting may determine the location of a school site was determined by the Supreme Court of Rhode Island. Ramon Guiteras willed a sum of money to the town of Bristol for a schoolhouse to serve as a memorial. Thereupon the financial town meeting located the site which was vetoed by the school board.

When Walter E. Ranger, state superintendent, decided that the power to locate sites was lodged with the school committee, an appeal to the courts was taken. The Supreme Court sustained the position taken by Ranger, holding that "The duty of locating schoolhouses is in the school committee and not in the financial town meeting. Any suggestion of the town meeting upon such a matter must be regarded as advisory merely. It is without binding legal force upon the committee."

The court further held that a school committee location is not illegal because the tract selected is large. Here the court expressly approves the Commissioner's ruling: "While the tract is large, it is not excessively large, considering the modern notion of provision for suitable playgrounds as accessories of school buildings." The school committee may rescind a location provided no legal rights have intervened, and provided no action based upon the selection has been taken by any person or other municipal body.

—When the question of dropping married women teachers from the payroll came up in the board of education at Bay City, Mich., it was decided by a vote of eight to one, to leave the matter in the hands of the superintendent. Thereupon the Times-Tribune, a local newspaper remarked: "This is exactly the course that should be followed. It is not the business nor the right for an inexperienced person to tell the superintendent whom he shall and whom he shall not engage. The superintendent is responsible for results. He is the agent of the board hired for the purpose of rendering services."



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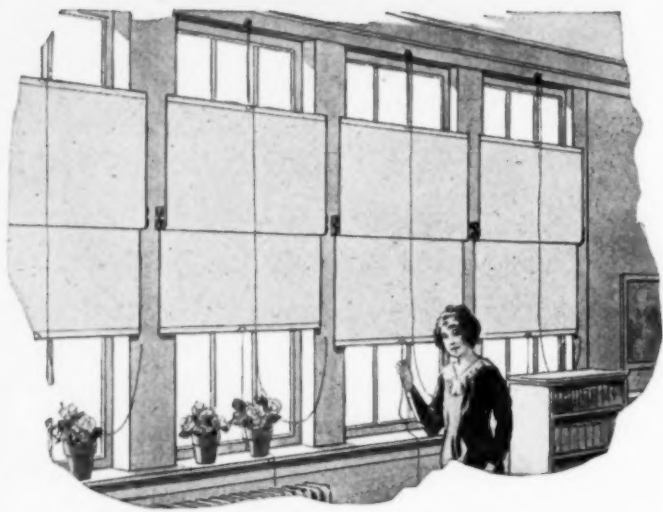
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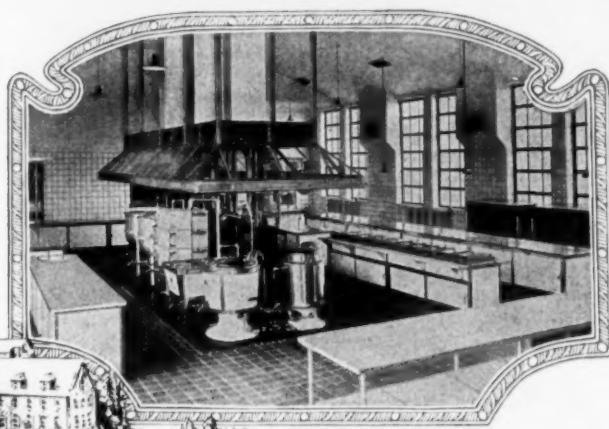
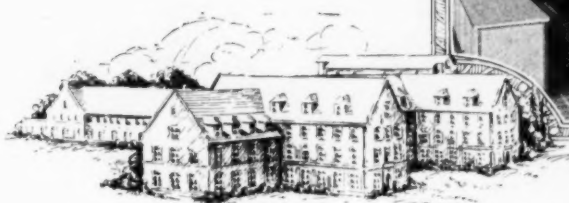
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### SHALL THE TEACHER BE A LOCAL RESIDENT?

The board of education of Toronto, Canada, is considering the advisability of dismissing the teachers in the school system who do not reside within the city limits.

"It is maintained by some that since they are in receipt of a salary that is raised by the taxes of the city, they should reside within the city limits, and thus contribute their share to the revenue of the municipality. On the other hand, it is claimed there are many teachers residing within the city limits who are employed by suburban school boards."

The Canadian School Board Journal in commenting on the proposal says: "The question naturally arises what should be done with the large number of people who reside without the municipality, and who are engaged in various commercial, industrial and professional pursuits within the city limits, and motor or ride the street car to and from their office, morning and night? They, too, are dependent upon the city to a large extent for their living, but contribute their taxes to the suburban municipalities. What about others who derive their income from city enterprises, and spend the winter in Florida or California, and a considerable portion of the summer in Europe? Where shall the line be drawn, and why should a beginning be made with the teacher?"

#### TEACHERS AND ADMINISTRATION

—Mr. Charles Stever, a member of the school board of Bay City, Mich., has proposed a rule under which married women would be barred from teaching in the schools. The rule would not affect married women now on the teaching staff.

—In rescinding a war-time rule, the New Jersey state board of education has barred teachers

from outside the state, where such teachers possess only three years of high school and two years' normal training. In the future, such teachers must undertake courses for making up the deficiency.

—Married women are barred from teaching in Irvington Township, Ia., by order of the board of education.

—A defensive movement has been begun by certain teachers of Indianapolis in the fight to prevent the merging of the local teachers' pension fund with the state fund. Members of both factions claim advantages for their respective propositions. Those opposing the merger declare it will mean the ultimate control by the state of Indianapolis teachers' affairs. Those favoring the merger declare it is to the financial betterment of teachers as the state fund offers advantages over the city fund.

—Secretary E. T. Cameron of the Michigan Teachers' Association has announced tentative arrangements for the establishment of a teachers' placement bureau. The bureau is intended to assist teachers of the state in securing better positions, and will be conducted under the supervision of the state teachers' organization.

Under the plan, teachers will register with the state teachers' association, for a given fee, the bureau also serving as a clearing house for schools in placing teachers in suitable positions.

—Wilmington, Del. The school board has adopted a new rule, requiring that one year of successful teaching experience shall be required of teachers from outside the state. A former rule requiring a year of experience from all elementary teachers, both within and without the state, caused general dissatisfaction and was rescinded.

—Yakima, Wash. The school board has adopted a policy giving preference to unmarried women in filling vacancies on the teaching staff. Married women now teaching will be retained in the service.

—The Sullivan bill, now before the state legislature of Ohio, is being opposed by the teachers. Under the bill, employers' contributions to the retirement fund are to be terminated, with the result that payments by the state, through boards of education, will be discontinued.

—Miss Mona Crouse of West Alexandria, Ind., recently passed the teachers' examination held at Columbus, which entitles her to a state life

certificate, the highest award of the state.

—Miss Marie Mitgaard, a Danish teacher of physical education at Kimballton, Ia., whose ability to teach school has been debated in the court at Audobon, has won her case. The court ruled that Miss Mitgaard is competent to teach and ordered the 25 absent students to return to classes. The court took occasion to reprimand the representatives of the opposing factions in the school and advised them to effect an amicable settlement.

—The state educational department of Wisconsin has recently issued the following ruling: A teacher in order to enforce discipline is privileged to keep a child in at recess or for a reasonable time after the close of school in the afternoon. The mother of the child has no right to rush into the schoolroom when she has learned that the child is "kept after school" and forcibly take the child from the schoolroom. Such an act disturbs the discipline of the school and places a mother in a position where she should apologize for her conduct, especially if the teacher and the board rule that the child shall not be admitted to school privileges until such apology is made.

#### A STUDY OF PUBLIC SCHOOL SALARIES

A study in teachers' salaries which adopts for its slogan "better salaries, better teachers, better citizens," has been prepared by the research division of the National Education Association. "The child's, not the teacher's, welfare is primarily at issue in any consideration of teachers' salaries" is urged in the opening paragraph, followed by the contention that "when a school board member casts a vote for a salary schedule, he votes for poorly trained, indifferently trained, or well trained children. He cannot get away from it. The facts are too plain. They show that the salaries which a community pays its teachers determine the quality of the teachers who draw them. Those communities which have sown 'economy' in the past are today reaping 'illiteracy,' and other evidences of educational inefficiency."

The study urges five basic reasons why every school system should have an adequate salary schedule:

1. The teachers' salary schedule, in the long run, more than any other factor determines the quality of people attracted to the teaching profession.





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New high school buildings are nearly all now being safeguarded by this wonderful acid-proof pipe; and many schools built but a few years ago, are replacing other corroded material with Duriron.

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2. The teachers' salary schedule, more than any other factor, determines the quality of preparation of teachers.

3. The teachers' salary schedule determines the quality of human material that continues in the profession.

4. The teachers' salary schedule determines a school board's chances of obtaining the services of capable teachers.

5. Teachers' salaries indirectly determine a child's outlook upon life.

Each of the basic reasons is fully argued and explained. A large number of tables show the salaries that are paid to administrators and teachers throughout the United States.

#### TEACHERS' SALARIES

—Prescott, Ark. The school board has adopted a single salary schedule for teachers in white schools. The schedule extends over a period of nine years. It offers substantial raises for all teachers retained, bringing the average for teachers in the primary and grammar grades up to the average for such teachers in school systems of similar size in the state.

—The school board of Mitchell, S. D., has adopted a salary schedule, under which teachers are divided into three classes based on training and experience. Teachers with advanced normal training and two years' experience are placed in Class I; teachers with three years' normal or college training, and two years' experience will be placed in Class II; college graduates with A. B. or equivalent degree, and two years' experience will be placed in Class III.

Under the schedule, teachers in Class I will begin at a minimum of \$1,100, with annual increases up to \$1,500; teachers in Class II will begin at a minimum of \$1,200, with annual increases up to a maximum of \$1,600; teachers in Class III will begin at a minimum of \$1,400, with annual increases up to a maximum of \$1,900.

—Wahpeton, N. D. The school board has adopted a salary schedule, providing for annual increases of \$25 up to a maximum of \$1,200. The increases begin with the second year of service.

—The new salary schedule, recently proposed by Supt. William McAndrew of the Chicago

schools, will require an increase of \$1,456,000 and a total increased appropriation of \$27,772,000 during the next five years, according to Secretary Nelson of the finance committee. The net increase required by the new schedule, including the one for new teachers, is as follows:

|            |              |
|------------|--------------|
| 1925 ..... | \$ 1,456,000 |
| 1926 ..... | 3,724,000    |
| 1927 ..... | 6,237,000    |
| 1928 ..... | 7,395,000    |
| 1929 ..... | 8,330,000    |

Total increase in five years.....\$27,524,000

—Syracuse, N. Y. Salary increases for women high school teachers under the equal pay law have been held up pending a decision as to the legality of the board's action. Payment of the increases was scheduled to take place as soon as the 1925 budget was ready. It is possible the board may be enjoined from paying the higher salaries.

—Rhinelander, Wis. The school board has adopted a salary schedule based on efficiency rating and tenure of service of teachers.

Under the schedule, grade teachers will begin at a minimum of \$1,100, with gradual increases up to \$1,400; high school teachers will begin at a minimum of \$1,350, with gradual increases up to \$1,900. Grade principals will begin at \$1,350, working up to a maximum of \$1,700.

#### NEWS OF SCHOOL OFFICIALS

—Mrs. Hannah G. Hickey has been elected a member of the board at Warren, R. I., to succeed Frank J. Conley. Mrs. Hickey is the first woman elected to public office in the town. She is a graduate of Brown University and a former teacher in the local high school.

—Miss Sylvia Hunter, clerk of the board of education at Lansing, Mich., has resigned after a service of thirteen years.

—Roy M. Cross, superintendent of buildings at Springfield, Ill., has accepted a position at St. Petersburg, Fla.

—Mr. Charles G. Hagermann has been re-elected as president of the board at Muscatine, Iowa.

—Mr. W. R. McCornack of Cleveland, O., has resigned as architect of the board of education. The resignation becomes effective on June 30th.

—Mr. A. P. Lee has been elected president of the board of education at Marshalltown, Iowa.

—Dr. Milton Daily has been elected president of the board at Sioux City, Iowa.

—Mr. James Nuckolls has resigned as secretary of the board at Eldora, Iowa.

—Mr. H. L. M. Bruner and Edgar Bruner, who recently removed to Toledo, Iowa, from Monticello, have completed a long record of service for the schools. The former served as secretary of the schools for more than 35 years, and the latter had served as treasurer for more than 23 years.

—Mr. Ernest Ebert has been reelected as president of the school board at Bremerton, Wash.

—Mr. Walter J. Chase of Roslyn, Pa., has been elected president of the school board of Abington Township, Montgomery County, Pa.

—Rev. J. M. Wilson, Arthur Watt and C. M. Iddens are new members of the board of education at Bellingham, Wash.

—The school board of Mitchell, S. D., has reorganized with the election of Mr. Frank J. Herrick as president; Mr. H. E. Hitchcock as vice-president; Mr. A. B. McKeey as secretary, and Mr. A. F. Smith as treasurer.

—The school board of Red River Parish, Coshatta, La., has reorganized for the year with the following members and officers:

President, G. Crawford; Vice-President, H. R. Cupples; Superintendent-Treasurer, A. H. Horton; Secretary to Superintendent, Mrs. O. P. Ogilvie, Jr.; Members: Z. P. Holley, C. H. Kennington, J. F. Sconyers, H. S. Coleman, R. A. Clanton and Dan Shaughnessy.

—The Jason Lee School, at Tacoma, Wash., named in memory of a pioneer, was recently dedicated. The exercises were presided over by Pres. W. C. Wheeler of the Board of education. Mr. Robert M. Davis delivered an address on Jason Lee and the development of the northwest.

—When George W. Toms retired from the board of education of Marion, Ia., of which he was president, on March 16th, his retirement marked the end of a record for school board service almost unparalleled in the state—33 years of continuous service.



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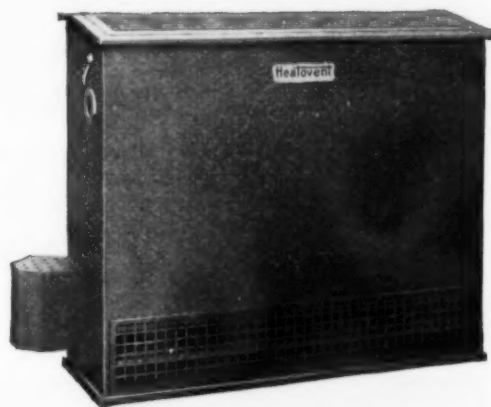
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### BUILDING COSTS IN NORTH CAROLINA

The total number of school buildings erected in North Carolina from January, 1920, to January, 1925, having at least five standard classrooms is 724. Of these, 518 were erected for the white county, or rural schools, 129 for the white schools in charter or city districts, 35 in rural colored districts, and 42 in city colored districts.

The average cost of each of the 518 rural white buildings was \$35,546. The total cost of these rural white buildings was \$18,413,840. The total cost of the 129 white city buildings was \$14,687,929, or \$113,859 per building, upon an average.

The total cost of the 35 rural colored buildings was \$411,264, an average cost of \$11,750. The 42 city colored buildings cost \$2,024,370, or \$48,199 each.

Seventy-five per cent of the school population is classed as rural and 25 per cent as city. Of the \$33,101,769 invested in new buildings for the white race, the rural schools, with 75 per cent of the children, spent \$18,413,840, but little more than 50 per cent, and the city schools, with 25 per cent of the children, spent \$14,687,929, nearly as much. The city buildings were financed almost entirely by voluntarily voted local bond issues. County buildings were built by means of local bond issues, loans from the special building fund and the state literary fund, and appropriations of county funds.

Twenty-one of the twenty-four largest city systems reported buildings which they had constructed during the last five years. There were 49 of these buildings, containing 667 classrooms, erected at a total cost of \$8,223,226. The average cost per building was \$167,820, and the average cost per classroom was \$12,328. This is more than three times the cost of the average rural schoolroom.

In one of these cities the per classroom cost was \$21,625; in another it was \$18,602; in five it was over \$15,000, and in ten the cost was over \$10,000 per classroom.

Ten of the fifteen smallest charter schools reported new construction for the five years since January 1, 1920.

These ten little charter schools erected ten buildings for the white race. These ten buildings had 96 classrooms and cost \$171,000. The average cost, therefore, was \$4,906 per class-

room, about one-third the average cost in the 24 largest cities, but over a thousand dollars per classroom higher than the rural cost. Not one of these little systems expended as much per classroom as the average cost in the 24 largest systems, but the cost in three of them was less than the rural average.

### FACTS CONCERNING THE ALASKA SCHOOLS

Alaska now supports 77 public schools with 200 teachers on an enrollment of 4,000 pupils. The median salaries paid to grade teachers is \$1,485; high school teachers, \$1,650; principals, \$2,000; superintendents, \$2,500.

The budget for the ensuing biennium calls for \$815,070. The largest item herein is \$405,000 which goes to the support of schools in incorporated towns and districts. The next largest item is \$280,000 which supports the schools outside the incorporated districts. One item, \$40,000, is designed to support children while attending school outside of the home district at the rate of \$30 per month. The budget, too, provides \$30,000 for salaries and traveling expenses of nurses.

Local sources contribute 33.72 per cent of the cost of maintenance. The balance, 66.28 per cent, is provided by the Territory.

### SCHOOL BUILDING NEWS

—A \$3,000,000 school bond issue was carried at Lincoln, Nebraska. It is now proposed to inaugurate a survey before determining upon the building program.

—Newark, N. J. The school budget for 1925-1926 has been reduced from \$8,758,653 to \$8,287,633, by reducing the amount the city must furnish from \$6,778,741 to \$6,000,000. The estimated amount to be received from the state will be \$1,979,912 which, together with the approximate balance of \$250,000 on hand, will bring the budget to its present figure. Most of the reductions in the tentative budget were reductions of figures to last year's totals, where increases had been approved by the board. The total of the cuts in the budget amounted to \$471,000.

—Supt. William J. O'Shea, of New York City, predicts that the part-time classes now due to an over-crowding of the schools will be fully relieved by next fall. The total day school registration in February was 968,517, an increase

of 17,188 over a year ago. Of the total enrollment, 792,510 pupils are on whole time regular schedule; 90,811 on whole time special schedule, formerly classed as double session, and 85,196 pupils are on part time.

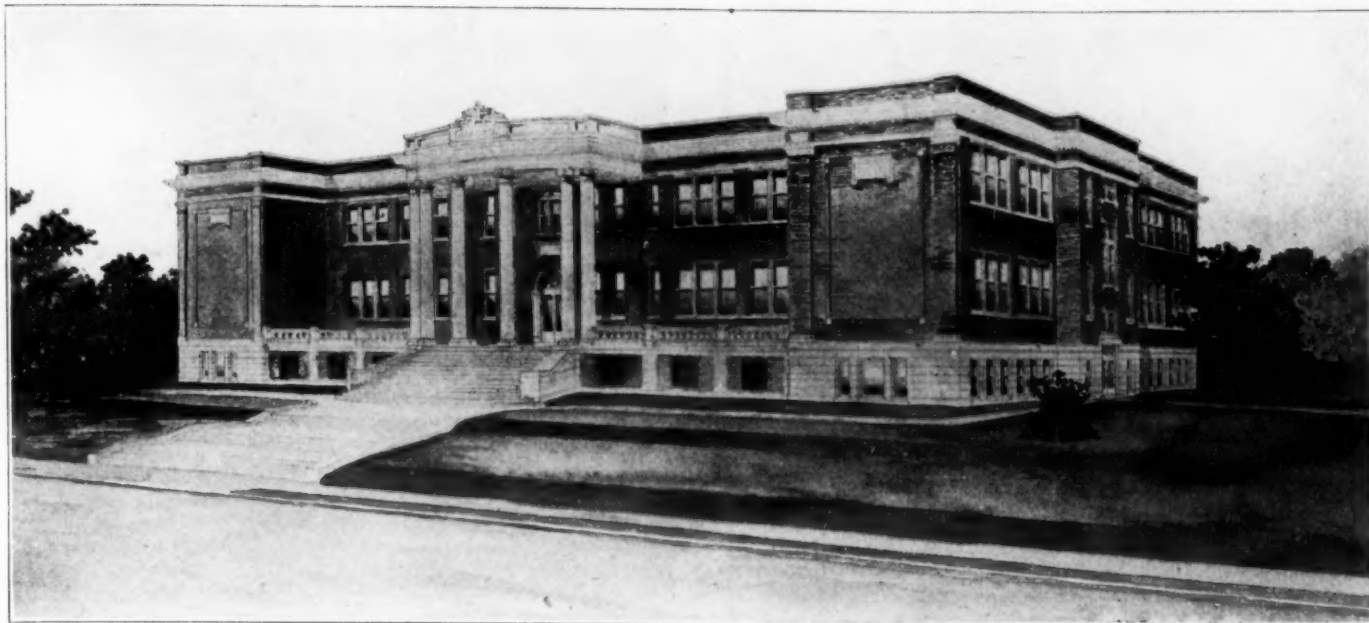
—Cheltenham Township at Elkins Park, Pa., is erecting a high school to cost approximately \$600,000. The building will be so planned that it will eventually contain 51 classrooms. It is being erected by Davis, Dunlap & Barney and will be completed ready for use by September, 1926.

—The state of Oklahoma has passed a law requiring that school boards in the several school districts shall provide funds and adopt rules for carrying into effect provisions of the law relating to exit doors on school buildings, screens or window guards over windows, and the use of lighting facilities using an open flame. It is the duty of the county superintendent to examine each building in his district at least once each year to see that school boards comply with the law and to report undesirable conditions which he may discover. Any superintendent, teacher, school board or member of a board who fails, or neglects to comply, with the provisions of the law is subject to the penalty of a fine of not less than ten dollars nor more than fifty dollars.

—Boise, Ida. The school board has taken steps to improve the acoustical facilities of the high school auditorium. The deficiency in sounding properties has been traced to overtones due to the length of the hall and the large amount of hard surface present. The acoustical expert has proposed as a remedy, that heavy draperies be placed over the windows, that aisle runners be laid over heavy lining material, and that seats be padded for absorption of the overtones.

—Indianapolis, Ind. Changes in the building program of the board recently adopted by that body, provide for the construction of a twelve-room building for School No. 78, to cost \$160,000 and the abandonment of plans for additions to Schools Nos. 15 and 33. Other changes are the removal of portable buildings at School No. 78 to relieve congestion in two other schools, and the adoption of plans for a new building at School No. 46. The plans provide for a sixteen-room school, to be erected at a cost of \$160,000.

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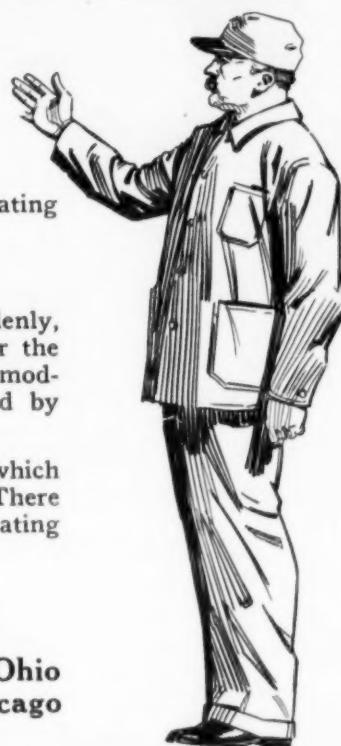
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## Annual Meeting of the Michigan Association of School Superintendents and School Board Members

H. C. Daley, Secretary

The fifty-second annual meeting of the Michigan Association of School Superintendents and School Board Members was held in Ann Arbor, April 1 and 2, 1925. President Leslie A. Butler opened the meeting with brief remarks descriptive of the present educational situation in Michigan.

D. B. Waldo, president of Western State Normal School, discussed "Teacher Certification Requirements in Michigan." He cataloged the present needs as being:

1. Standards.
2. Incorporation of these standards into law.
3. Publicity, of a decent and reasonable type.
4. Compensation sufficient to attract into the profession a fair percentage of the best boys and girls, those with high I. Q.'s, potentiality and personality.

5. Proper buildings and ample equipment.

Mr. Waldo discussed the law to take effect next September by which Michigan's minimum legal requirements for teachers is raised to one year of professional training in addition to the equivalent of the training afforded by a complete four year high school course. He advocated and predicted an increase to a two year professional requirement within a very few years. More than 48 per cent of the Michigan teachers now in service, he said, have less than this proposed requirement. He bewailed the fact that less than sixteen per cent of the 722,000 teachers of America are men, and urged that conditions be made such as to attract red blooded young men to the profession.

Hon. Thomas E. Johnson discussed the condition of school legislation now before the legislature. He predicted the passage of several of the more worthy measures before the close of the session. He discussed the primary school fund bill, now ready for the Governor's signature, by which five per cent of the primary school money will be divided among the poorer

districts of the state according to their needs instead of being divided according to school population as at present.

He spoke at length upon the much needed attempt to codify Michigan school laws, a work, the like of which, has not been attempted since 1881. He predicted that admission to normal schools would soon be limited, of necessity, unless greater financial support be provided by the legislature. Many practical questions were asked from the floor and promptly answered.

The following committee appointments were announced by President Butler:

**On Nominations:** Mrs. Ella Aldinger, Board of Education, Lansing; H. D. Montgomery, Board of Education, Royal Oak; A. A. Rather, Superintendent, Ionia.

**On Resolutions:** Superintendent L. L. Tyler, Muskegon Heights; (Mrs. C. E.) Hannah Vowles, Board of Education, Mt. Pleasant; Superintendent D. A. VanBuskirk, Hastings.

C. L. Spain, deputy superintendent, Detroit, then gave an illustrated address on "Development of Elementary School Buildings." Starting with conditions in the days of Horace Mann, as described by Barnard, he traced the development of the elementary school building from the simple type in which a single box-like room contained a row of desks facing the walls and windows, with benches without backs, and with the stove in the middle portion of the room, down to the present scientifically lighted, heated and ventilated modern buildings, with single, movable seats, modern furniture and built-in equipment. He gave as the three principal factors in the development, the demands of the curriculum, of health, and of safety.

Professor Clifford Woody then discussed the topic, "Recent Salary Information." He said that because of known conditions relative to professional preparation of Michigan teachers, the salary committee does not recommend for

the immediate present any more stringent requirements than the one year professional training already incorporated into the law to take effect in September. The committee does recommend that for rural districts each year of professional training above the minimum requirement shall be rewarded by a \$100 increase in salary, that the minimum salary be \$900 per year, and that the salaries be increased five per cent for each year of experience, up to six years.

In city schools the committee recommends that two years of professional training be required, that \$200 be allowed for each additional year of preparation up to six years, that the minimum be \$1,200, and that the annual increase allowed for experience be from six per cent to ten per cent of the salary.

A. W. Thompson of the State Department of Athletics discussed "The High School Athletic Situation." He pleaded for cooperation of school board, superintendent, principal and athletic director. He opposed the giving of undue prominence to athletic interests, a situation likely to arise because of the fact that athletics is the one school activity that is judged by the community week by week. He urged cooperation, high standards of athletic eligibility and good sportsmanship.

Following a six o'clock dinner at the Michigan Union, Deputy Superintendent Charles L. Spain of Detroit was introduced by Dean Whitney of the Michigan School of Education. Mr. Spain gave a thoroughly appreciated address upon the subject, "Some Obstacles to Educational Progress." The big obstacle, he said, is the lack of trained people to fill the new places. He proclaimed the lack of teachers and especially of principals. He traced the history of the development of the elementary school principalship showing that principals had generally been left with the least vital activity, that of administration.

He approved of experimentation as a wholesome activity for teachers and spoke of it as a promoter of enthusiasm, openness to truth and of freedom from dogmatism. He traced opposition as usually originating from within the ranks rather than from the outside, giving as a specific instance the case of a teacher long in the



service and not in harmony with the modern testing movement.

In the business meeting the following corps of officers was elected for the ensuing year:

President, Mrs. C. E. Vowles, Member of Board of Education, Mt. Pleasant.

Vice-President, Don Harrington, Superintendent of Schools, Albion.

Secretary, H. C. Daley, Director of Supervision and Surveys, Highland Park.

By a rising vote this tribute to President Burton by the Resolutions Committee was adopted as the sentiment of the Association: "We feel in the passing of Marion Leroy Burton that higher education in America has lost its most distinguished exponent. We commend the wisdom of the Board of Regents of our University in securing for Michigan such a magnificent leader. His service to the state in bringing our great University near to the people is one of the outstanding achievements of this period of her educational history. While profoundly regretting his going we believe that his dream of a greater university will be made a reality through the loyalty of Michigan men and women. We wish to express a deep sense of gratitude that our state has been made the beneficiary of his closing year of outstanding service and that the memory and influence of his dynamic personality and vibrant messages are still the heritage and inspiration of Michigan. He will always remain for us the Knight of the White Plume on the highway of humanity's best aspirations."

Other resolutions adopted approved the legislative policies of the State Department, in par-

ticular the necessity for the codification of Michigan's school laws, the attempted equalization of opportunity in the schools by a wiser distribution of school funds, the general improvement of the administrative machinery of education, both rural and city, and a continuation of the policy of affording active backing for the financial support of all of the institutions of the state devoted to teacher training.

On Thursday morning, Superintendent M. W. Longman submitted a tabulation of tax statistics recently collected from 95 Michigan cities of over 2,000 population in which it was shown that the median total tax per \$1,000 of assessed valuation is \$37.85 and the median school tax is \$14.33. The school tax ranges from \$4.25 up to \$39.20 and the total tax from \$17.74 up to \$63.20. Thirty-nine per cent of the total tax was the median of the per cents spent in the various cities for school purposes. Mr. Longman urged caution in the interpretation of any set of figures thus collected.

Mr. J. W. Clarke, member of the board of education of Zeeland, discussed Mr. Longman's presentation. He professed little sympathy for the recent movement to legislate for the relief of the educational burden of the poorer districts of the state. He opposed taxation of inheritances and of outside insurance companies. He opposed the use of the initiative and referendum for securing tax legislation on the ground that the powers of taxation belong exclusively to the legislature.

The meeting was then formally adjourned by President Butler.

## School Business Officials Will Meet in Kansas City

The National Association of Public School Business Officials will hold its 1925 convention May 19th to 22nd, at Kansas City, Mo.

The railroads have granted the association a reduction of one and one-half fare for the round trip on the certificate plan. A reduction of fare for the round trip is contingent on an attendance of not less than 250, including members and their families. Return tickets issued at the reduced fare will not be good on any limited train on which such reduced fare transportation is not honored.

The headquarters for the convention will be at the Hotel Baltimore.

### The Program

Tuesday, May 19th

Addresses of Welcome—Hon. Albert I. Beach, Mayor of Kansas City; Hon. W. W. Gordon, Mayor of Kansas City, Kans.; Hon. D. M. Pinkerton, President of the Board of Education, Kansas City, Mo.

Address of Response—Mr. William Dick, Secretary of the Board of Education, Philadelphia, Pa.

President's Address—Mr. R. M. Milligan, Commissioner of School Buildings, St. Louis, Mo.

Reading of communications, presentation of the annual report, and appointments of committees.

Value of Technical Education to the Community—Hon. F. B. Edmonds, Member of the Board of Education, Toronto, Canada.

Standardization in the Handling of Supplies—Mr. J. S. Mullan, Secretary of the Board of Education, Rochester, N. Y.

Economies Resulting from Progressive School Planning—Mr. Arthur B. Moehlman, Director of Reference and Statistics, Detroit, Mich.

Wednesday, May 20th

Matters of Correct Accountability for Public School Systems—Mr. A. H. Bell, Auditor, Gary Public Schools, Gary, Ind.

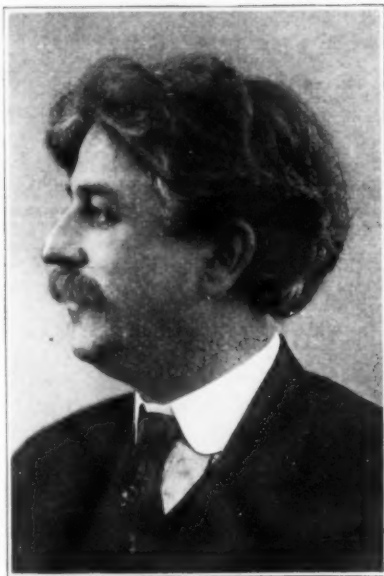
Adapting Accounting and Administrative Methods to Changing Conditions—Mr. Raymond Courtney, Secretary of the Board of Education, Tulsa, Okla.

Relation of the Auditor or Accounting Officer to the Preparation of the Budget and the Compilation of Financial Statistics—Mr. Richard L. Daly, Auditor, Board of Education, St. Louis, Mo.

Instruction and Location of the School Plant, Dr. Paul C. Parker, Dean of the College of Education, Iowa City, Ia.

Practical Organization of a State Department of Education in Relation to District Business Officials—Mr. Herbert M. Morse, Business Manager of the State Department of Public Instruction, Trenton, N. J.

Public School Business Administration and the Reorganization of School Business Departments—Mr. George A. Widder, Secretary, Board of Education, Kansas City, Kans.



R. M. MILLIGAN,  
St. Louis, Mo.  
President, National Association of School  
Business Officials.

Thursday, May 21st

Introducing a State System of Financial Accounting for Schools—Dr. John Guy Fowlkes, School of Education, University of Wisconsin, Madison, Wis.

Significant Progress in Heating and Ventilation Design—Mr. Edwin S. Hallett, Chief Engineer, Board of Education, St. Louis, Mo.

School Building Construction Ideas Suggested by Examples in the Tornado of March, 1925—Mr. F. A. Borgsteadt, Assistant to the Commissioner of School Buildings, St. Louis, Mo.

Efficient School Illumination—Mr. Oliver T. Sweet, Electrical Engineer, Board of Education, St. Louis, Mo.

The sessions will be concluded with a sight-seeing trip to various points of interest in the city and a complimentary banquet to be arranged by the local committee.

Information concerning the program may be obtained by writing to Mr. R. M. Milligan, president, St. Louis, Mo., while inquiries about railroad rates and hotel accommodations should be addressed to Mr. John S. Mount, secretary, State House, Trenton, N. J.

### SCHOOL INDEBTEDNESS IN NEW JERSEY

The state school commissioner of New Jersey has presented a report of the resources and expenditures incident to the conduct of the school

system. The information is reduced to terms which make it useful for comparison purposes, and is presented in order that it may be available to the people interested in comparing the condition of any school district with others of like size.

The report contains a table giving the assessed wealth per pupil in each district, the cost of education per pupil, the bonded debt per each \$1,000 assessed wealth, the school debt per capita, etc.

It is brought out that between 1914 and 1924 the total outstanding school indebtedness increased from \$43,376,011.42 to \$116,919,064.29, an increase of 141 per cent. A small part of the bond issues have been made for buildings to replace worn-out structures, but the larger part has been expended for new buildings to provide for an increasing school population.

The school enrollment has risen from 496,899 to 686,005 in the same period of time, an increase of 39 per cent in ten years. During this time also, the value of the school plant has grown from \$57,670,223.57 to \$170,547,848.24, an increase of 195 per cent. Building costs of 1923-1924 were approximately 120 per cent higher than in 1913-1914. Bonds outstanding in 1913-1914 represented a mortgage of approximately 75 per cent of the value of school buildings of that year, and the bonded debt of 1923-1924 represented a mortgage of 68 per cent upon school property.

### Per Pupil Costs in New Jersey

Per pupil costs for the expenses of administration, instruction, operation, maintenance, auxiliary agencies and miscellaneous activities have been compiled by the state education department of New Jersey for the year 1923-1924.

Using average enrollment as the factor on which unit costs are computed, the median cost per pupil for 1923-1924 was \$92.04 in the case of the 38 larger school district of the state.

The expenses of administration ranged from \$5.44 in the case of Asbury Park to \$0.84 in the case of Landis Township. The median cost of administration was \$2.73, while that for instructional purposes was \$72.66. The median cost of operation of school plant was \$9.45 per pupil; that for maintenance of plant was \$4.10, and that for auxiliary agencies was \$1.92.

In the case of the county, the median total cost per pupil was \$83.69, with Cumberland County spending less per pupil than any other county. The state average per pupil was \$88.02.

### ASSOCIATION ELECTIONS

—The central division of the Illinois state teachers' association elected the following officers: President, M. J. Holmes, Normal; Vice-president, Ada P. Foster, Fairbury; Secretary, Maud Blue, Clinton; Treasurer, H. B. Beecher, Peoria.

—W. E. Richmond, of the high school at Newton, Mass., was chosen president of the Eastern association of physics teachers. Other officers chosen are: Vice-president, R. H. Houser of Mander Hall School, Cambridge; secretary, George A. Cushman of Boston English High School; treasurer, William F. Rice of Boston Latin School; executive committee, Francis E. Mason of the Boston High School of Commerce, R. H. Delano of Roxbury High School, and Daniel J. Shea of the High School of Commerce.

—Superintendent K. O. Cochran, of Marland, Okla., was elected president of the Noble County, Okla., teachers' association. Homer P. King of Morrison was made vice-president, and Mrs. Ada Sims of Perry was elected secretary-treasurer.

—The twelfth annual conference on educational measurements was held April 17th and 18th, in connection with the second annual conference on elementary supervision, at Indiana University, Bloomington.

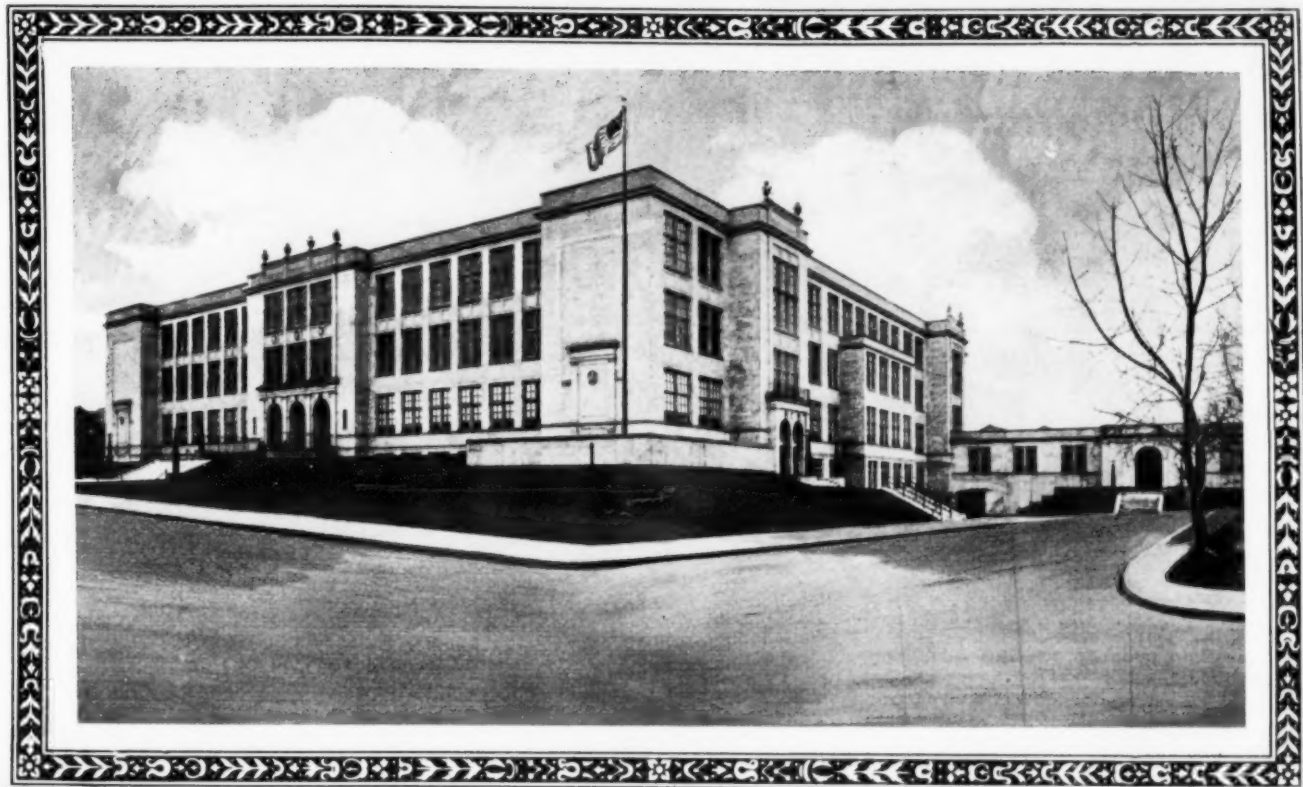
At the former conference, addresses were made by President William L. Bryan of Indiana University; by Dr. Ernest Horn of the University of Iowa; by Dr. Rudolph Pintner, Teachers College, Columbia University; by Dr. Harold F. Clark of Indiana University; by Dr. Herman H. Young, Indiana University; by Dr. B. L. Ullman, University of Iowa; by Edward Y. Lindsay, Indiana University; by Prof. W. W. Black, Indiana University, and others.

At the latter conference, addresses were made by Dean H. L. Smith of the University; by Miss Flora Drake, Indianapolis, Ind.; by Dr. Ernest Horn of the University of Iowa; by Dr. G. H. Alderman of the Indiana University; by Miss Mina Langvick of Johnson County, Ind.; by Miss Georgia Davis of Richmond, Ind., and by W. F. Vogel, state education department, Indianapolis, Ind.

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July 16, 1922.

Mr. J. E. Dwan,  
Citizens National Bank Bldg.,  
Los Angeles, California.

My dear Sir:

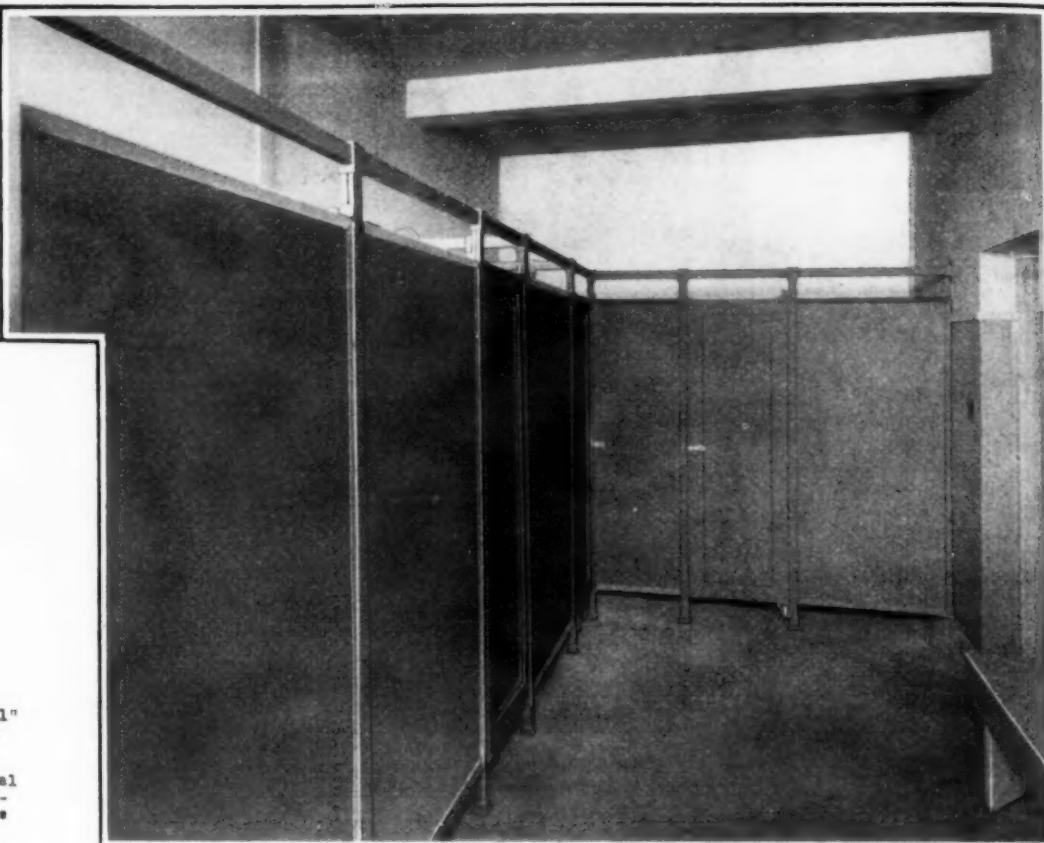
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products for toilet partitions and for dressing  
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is firstclass in every way. It is neat and sub-  
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I have used a great deal of "Weisteel"  
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Very truly yours,

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**THE OHIO TEACHERS' CODE OF ETHICS**

The Ohio State Teachers' Association adopted  
at their recent meeting the following code of  
ethics:

(1) Teachers should present, not only in  
conduct, and in faithful service, but in well re-  
tained health and social attitude, a worthy ex-  
ample to their pupils and to the community.

(2) Teachers should strive to lay in the lives  
of their pupils sound moral and spiritual, as  
well as intellectual, foundations for true citizen-  
ship.

(3) All teachers should establish friendly  
and frank relations of cooperation with pupils  
and parents, and support organizations for that  
purpose.

(4) Teachers must be sure to deal justly  
with every child, without prejudice or prefer-  
ence.

(5) It is unprofessional for a teacher to  
tutor pupils of his own classes for remunera-  
tion, except by special request of school  
authorities.

**B.—Relation to the Profession and Fellow  
Educators**

(6) Teachers owe it to themselves and the  
profession to seek continued mental growth and  
efficiency by all available means, and also to in-  
crease their physical health and vigor.

(7) All teachers should feel deeply the  
worth and dignity of their calling, and not re-  
gard it as merely a stepping stone to other  
vocations.

(8) Every teacher ought to join local, state  
and national professional organizations and  
attend their meetings whenever possible.

(9) Teachers should encourage only those of  
high quality to become recruits to the profes-  
sion and should support every movement toward  
the elevation of its standards and efficiency.

(10) An unselfish sharing and exchange of  
new ideas and methods, and of information, is a  
service due to the profession, and all teachers  
should glory in the achievements of their  
fellows.

(11) Criticism of fellow teachers is unpro-  
fessional and detrimental, unless constructive  
and open, and any criticism of a predecessor or  
criticism in the presence of pupils, is especially  
unjustifiable.

**C.—Relation Between Teachers and Official  
Superiors**

(12) Teachers in the ranks and those in  
positions of authority owe to each other co-  
operation and support, in a spirit of loyalty and  
sincerity, and none should continue to work  
where this is impossible.

(13) While recognizing the necessity of  
authority and discipline, every school system  
should be imbued with a spirit of democracy,  
making possible freedom of constructive criti-  
cism or suggestion, on either side.

(14) No teachers, as individuals or groups,  
should ever appeal over the head of an immedi-  
ate superior, or a colleague, or to a school board  
instead of the superintendent, until honest effort  
has been made to bring about a mutual under-  
standing.

(15) It is unprofessional for teachers to seek  
appointment or promotion on any other basis  
than that of merit, to apply for a specific posi-  
tion unless certain of a vacancy, or to make  
applications elsewhere merely to force an in-  
crease in salary.

(16) Every teacher has a right to informa-  
tion regarding his professional rating with the  
authorities, and to notification and a hearing in  
fair time before his dismissal or non-appoint-  
ment.

(17) Supervisors or supervising officers  
should strive to get, and retain the point of view  
of the classroom teacher, and make their criti-  
cisms so accurate, fair, and sincere as to insure  
confidence.

**D.—Relation to the Public**

(18) All teachers should fulfill their civic  
duties, and share actively in community inter-  
ests, so as to exert a greater public influence,  
and combat all detrimental partisan influences.

(19) It is the duty of teachers and their  
organizations to educate the public as to the  
fundamental importance of universal demo-  
cratic education, the danger of any deviation  
therefrom, and the needs and problems of the  
schools and the profession.

(20) Before signing any contracts, teachers  
should be sure that such contracts are fair and  
just, and should fulfill all contracts in letter and  
in spirit, unless voluntarily released therefrom.

(21) Teachers should expect and work col-  
lectively for salaries sufficient to enable them to

live in comfort and security, improve them-  
selves by travel, study and meetings, and pro-  
vide for the years of retirement.

(22) As individuals or groups, teachers have  
a right to protest against injustice, but the im-  
portant public nature of their service renders  
any recourse to a strike or walkout indefensible.

(23) Teachers should avoid any entangle-  
ment with, or unearned favors from, book com-  
panies, or other firms commercially interested in  
the schools.

**THE MISSOURI SCHOOL SURVEY**

"In no other state in the Union perhaps has  
there been greater progress in education in the  
last two decades than in Missouri" is the state-  
ment advanced by a lay committee which co-  
operated with the educational experts in a sur-  
vey of the school interests of Missouri.

The investigators find that while the national  
expenditure for education is 11.8 per cent of  
the income in Missouri, the per capita expendi-  
ture is 24.8 per cent. In other words, the per  
capita cost is \$9.02. In 1913 Missouri's total  
expenditure for education was \$16,622,000. In  
1923 it was \$43,211,000. During this period the  
average daily school attendance increased 33.5  
per cent.

**Sources of Support**

The local school systems secure their support  
through a direct property tax which amounts to  
85.03 per cent of the total. The state contributes  
11.08 per cent, and the balance is derived from  
interest on funds and corporation taxes.

The inequalities in the taxable wealth of the  
several districts become quite glaring. While  
cities like St. Louis and Kansas City have almost  
\$6,000 in wealth back of each enumerated child  
and spends \$104.12 on each child enrolled, there  
are many counties where the wealth per child  
is as low as \$1,500 to \$2,500. In these counties  
the pupil's classes are large and the teachers'  
salaries low. Thus, the survey reveals the fact  
that a group of 45 counties spends \$21 per pupil,  
while another and smaller group spends \$99.

The recommendations, which are clear cut,  
uphold the county unit, provide for greater  
supervisory forces, better compensation for pro-  
fessional workers, and higher standards of cer-  
tification. It is concluded that it will require  
at least \$60 per child to provide minimum edu-  
cational facilities.



## A Serious Responsibility

**I**T is serious—the purchase of washroom papers. Tissue and towels made from old waste paper refuse are a menace to health. The “National” trademark is absolute protection.

“No-Waste” Toilet Tissue is made from fresh, clean spruce wood only—in mills as clean and sanitary as those of any food manufacturer. Besides, it saves money because only one double sheet at a time is dispensed from “No-Waste” cabinets, loaned free to large users.

“National” Paper Products save 20% to 30% in the washroom expenses of thousands of public buildings. For information, write to the National Paper Products Co., 55 Furnace St., Carthage, N. Y. (World’s largest manufacturers of important Paper Products. Representatives everywhere.)

### “Public Service” Towels

Regular and Junior sizes. 150-towel packages; 25 packages to carton. Sheet metal cabinets in white, olive and green.

### “No-Waste” Toilet Tissue

Secret formula gives strength and absorbency. 800-sheet packages. 125 packages to fibre cartons. Nickeled cabinets leased free.

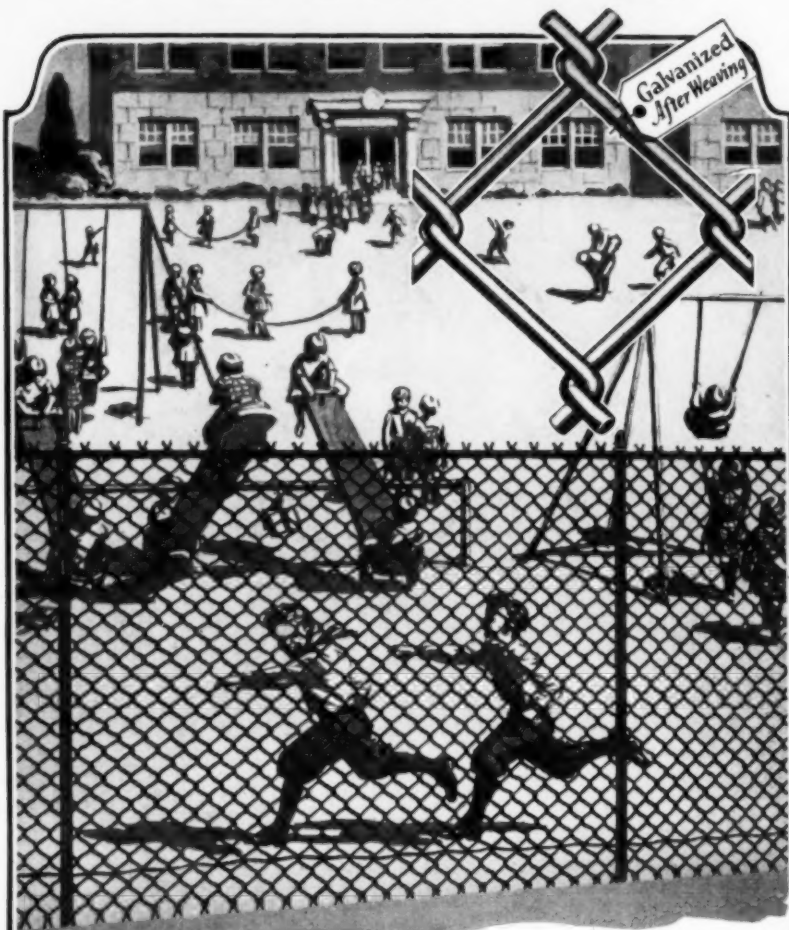
### “Toiltex”—in Rolls

1000 counted sanitary sheets per roll. Like “No-Waste” Tissue and “Public Service” Towels, made from spruce wood only.





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## Fences that last for decades

**F**IRST—because their chain link fabric is made of *rust-resisting copper-bearing steel*.

Secondly—because this fabric is *Galvanized AFTER Weaving* as a double safeguard against corrosion.

Thirdly—because of our *drive-anchor* method of securing the posts.

35 years of experience in building and erecting fences have convinced us that these Anchor features are essentials of *lasting* fence construction. Before you buy a fence, let us tell you more about them.

To assist school officials and others who have occasion to buy or specify fences and gates, we have prepared a comprehensive Specification Manual which contains much valuable and helpful data, and, as well, full information regarding the lasting construction of Anchor Products. We will gladly send you a copy.



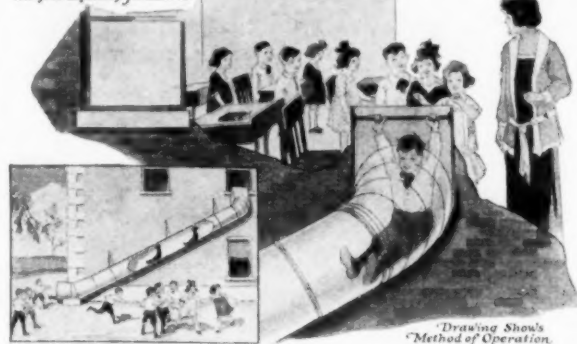
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We will gladly send you literature describing what FIRE PREVENTION EXPERTS consider the best fire escape known for safeguarding the lives of school children. There is no obligation on your part to make purchase.

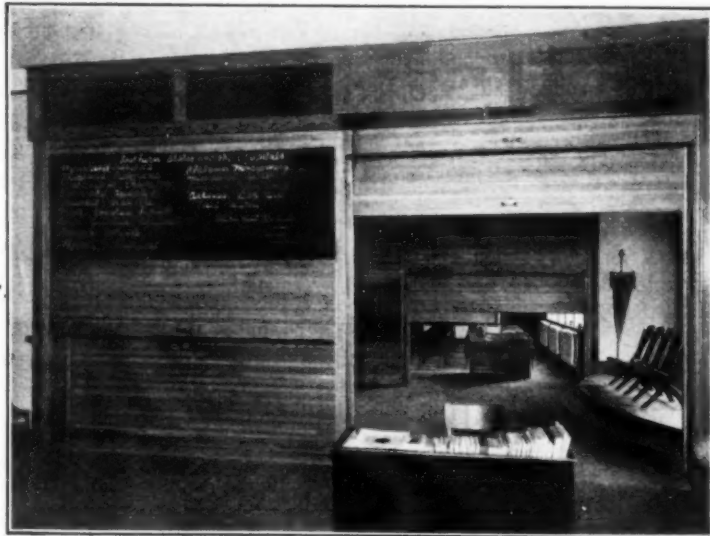
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*Riverside High School, Wichita, Kansas Lorentz Schmidt, Architect*

### FLEXIBILITY

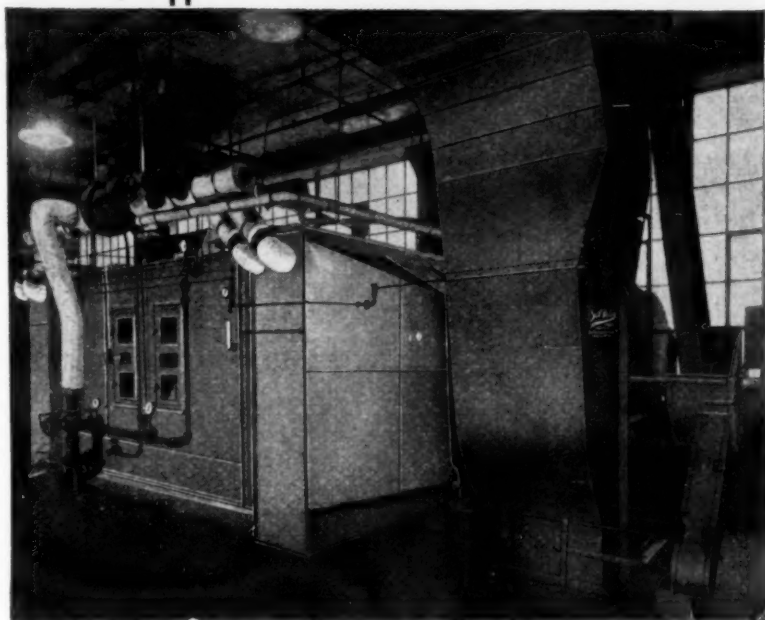
The installation shown above is a good illustration of the flexibility which may be had in a school plant by the use of ACME ROLLING PARTITIONS.

In this particular instance the center one of three rooms is used for study purposes. Recitations are held in the rooms on either side at the same time. When space is required for general assembly the partitions are rolled up out of the way and the posts removed—the entire operation taking but a few moments.

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**“Buffalo”**

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Among these are extremely quiet operations; reasonable limitations as to space occupied; speeds suitable for direct connection to motor if desired; accessibility, and, finally, long life and reliability.

That Buffalo fans successfully meet these requirements is indicated by the increasing number of schools, and public buildings where their use is specified.

Why not let us work with you in planning ventilating equipment? We have interesting catalogs if you can use them.

**Buffalo Forge Company**  
450 Broadway Buffalo, N. Y.

#### PERSONAL NEWS OF SUPERINTENDENTS

—Supt. A. H. Horton, of Red River Parish, Couchatta, La., has been reelected for a fourth term. In the past twelve years, the schools of Red River Parish have been placed upon a strictly modern basis. Large consolidated high schools have taken the place of smaller units, and the automobiles provide comfortable transportation for the hundreds of children who attend these schools. The schools are conducted for a full nine months' term, with revenues received from the parish and state. At present the parish taxes are uniform and parish-wide, tending to equalize the burden of taxation. The state contributes about twenty per cent of the total cost for operating the schools. Practically all teachers are normal or college graduates and receive substantial salaries.

—Mr. Henry G. Brown, 56, a former school superintendent of Indiana, died on March 17th at Pleasant Lake, Ind. Mr. Brown attended the Tri-State Normal School at Angola and the University of Chicago, and had held superintendencies at Auburn, Butler and Lebanon.

—Supt. J. H. Jarvis, of Harrison, Tenn., has been reelected for a two-year term.

—David Williams, a former superintendent at Redding, Ia., died at Omaha, Neb., on March 15th, at the age of 69. Mr. Williams was prominent in educational circles of Iowa for many years and held various superintendencies in the state.

—Supt. A. A. Rather of Ionia, Mich., has been reelected for another year.

—Mr. W. E. Wiley has been appointed as superintendent of elementary schools at Lodi, Calif., to succeed J. R. Overturf.

—Mr. C. W. Crandell, of Cadillac, Mich., has been elected superintendent of schools at Monroe, to succeed D. S. Spencer.

—Mr. B. E. Bergesen has been elected superintendent of schools at Ellendale, Minn., to succeed F. C. Lewis.

—Supt. G. H. Sanberg of Crookston, Minn., has accepted the superintendency at Rochester. Mr. Sanberg enters his new work on July first.

—Mr. J. R. Kerr of Chillicothe, Mo., has accepted a position as principal in one of the St. Louis schools.

—Supt. C. F. Dienst of Boise, Ida., has been elected president of the State Teachers' Association.

tion.

—George B. Coffman, a former superintendent of schools at Pana, Ill., died on March 2nd at a hospital in Jacksonville. Schools in Pana were closed the afternoon of the funeral as a tribute of respect to the late head of the school system.

—Mr. H. P. Shepard of Lincoln, Neb., has been elected superintendent of schools at Knoxville, Tenn., to succeed W. E. Miller.

—Supt. C. T. Johnson of Oswego, Kans., has been reelected for the next year.

—Mr. F. C. Gardner of Abilene, Kans., has been elected superintendent of schools to succeed W. A. Stacey.

—Supt. Arnold Gloor of New Ulm, Minn., has been reelected for another year.

—Supt. J. A. Fleming of Bonner, Kans., has been reelected for a fourth consecutive term.

—Supt. S. W. Johnson of Brookings, S. D., has been reelected for a sixth term.

—Mr. W. Howard Vanderhoef of Corning, N. Y., has been elected superintendent of schools at Bath.

—Supt. T. S. Benton of Brackettville, Tex., has been reelected for another year.

—Supt. C. F. Garrett of Fairfield, Ia., has been reelected for a seventh term.

—Supt. G. R. Ray of Beaverdam, Wis., has announced his retirement at the close of the present school term.

—F. L. Mahannah of Monticello, Ia., has been reelected for a three-year term.

—Supt. H. M. Taylor of Shenandoah, Ia., has been reelected for a two-year term.

—Mr. Norman J. Lasher of Gas City, Ind., has accepted the superintendency at Seymour. The appointment is for two years and carries an increase in salary.

—Supt. W. R. Van Walker of Wessington Springs, S. D., has been reelected for a period of three years.

—Supt. A. W. Honeycutt of Hendersonville, N. C., has been reelected for a seventh consecutive term.

—Mr. Clarence E. Vance has been elected superintendent of schools at Danville, Ill., to succeed Gilbert P. Randle, resigned. Mr. Vance has for a number of years been connected with educational affairs in Danville, and was for five years assistant superintendent under Mr. Randle.

dle. He is a graduate of Greer College and of the Illinois State Normal at Normal, Ill.

—E. Morris Cox, assistant superintendent of schools of Oakland, and one of California's foremost educators, died on March 17th. A memorial service for Mr. Cox was held in the auditorium of the Roosevelt High School, Oakland, which was attended by the entire educational staff of Oakland, as well as representatives of the state and county, and educators of the East-bay section who had known Mr. Cox during his ten years' leadership of the state teachers' association.

—Mr. B. C. Shankland has been elected superintendent of schools at Cadillac, Mich., to succeed Charles W. Crandell.

—F. L. Schlagle has been appointed assistant superintendent of the Kansas City, Kansas, schools. J. F. Wellemeyer has been made principal of the Central high school, Sherman D. Scruggs, supervisor of colored elementary schools, and L. H. Brotherson, superintendent of buildings and grounds.

—Owing to the policy of economy adopted by New Bedford, Mass., Superintendent Allen P. Keith will not recommend Assistant Superintendent Clarence E. Howell for reappointment. Mr. Howell came to New Bedford from Lincoln, Nebraska, where he had served as assistant superintendent. He came to New Bedford in 1922 and served under True C. Morrill, then superintendent, and later under Allen P. Keith, receiving a salary of 5,000 a year.

—Mr. Warren Nevin Drum, president of the Central State Normal School, Lock Haven, Pa., has resigned to enter the teachers' agency work. He has purchased the entire business of the Pratt Teachers' Agency, New York City, and is conducting the business of this old established firm.

—Mr. D. W. Armstrong, district director of the Pennsylvania State Department of Public Instruction, has been appointed principal of the Lock Haven State Normal School, succeeding Mr. W. N. Drum.

—The state department of Oklahoma has appointed Superintendent A. L. Crable of Marietta City, as state high school inspector.

—W. G. Bolcom, who has served Rochester, Minn., as superintendent of schools for the past five years, has been dismissed. When his re-



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## Holtzer-Cabot Fire Alarm Systems for Schools

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**THE HOLTZER-CABOT ELECTRIC CO.**

appointment came under consideration he insisted upon a three-year contract. This the school board declined to consider and suggested that he resign. When he refused the board voted him out. Mr. Bolcom has been in school work for twenty years. The Rochester school system, he contends, has been growing rapidly on a narrow budget. He adds: "Furthermore, we have a gilt-edged faculty—that's one work of an efficient superintendent. The faculty has been welded together and is practically a unit. That is something that pays compliment to the leadership of the superintendent. Anybody in such a position as this is likely to make enemies. The superintendent is continually checking back and reporting on his workers. But this school system has never had a more compact, better satisfied faculty."

—Supt. A. D. Montgomery of Sullivan, Ind., has been reelected for a two-year term, at a salary of \$3,750 per annum. Mr. Montgomery is completing his third year as the head of the local schools.

—Supt. L. J. Hanifan of Paducah, Ky., has been reelected for a four-year term, beginning with July first.

—During the superintendency of W. D. Johnston at Weirton, W. Va., the enrollment has increased from 1,000 to 2,800 pupils, and the teachers from 25 to 78. The school tax levy has been fixed at 12.1 mills for current expenses and 2.2 mills for bonds.

—Supt. Chas. E. Dryden of University City, Mo., was unanimously reelected at the regular meeting of the board of education on March 19th.

—Supt. R. W. Kranshaar of Mobridge, S. D., has been reelected for a two-year term, with an increase in salary.

—Supt. J. G. Farmer of Gregory, S. D., has been reelected at a salary of \$3,500. Supt. Farmer also serves as clerk of the school board.

—Supt. W. J. Mishler of Grants Pass, Ore., has been reelected for another two-year term.

—Supt. H. M. Broadbent has been reelected as head of the schools at Baker, Ore., for another year, at a substantial increase in salary.

—Supt. A. C. Hampton of Lagrande, Ore., has been elected superintendent of schools at Astoria.

—Supt. Oscar M. Corbell of Prescott, Ark., has been reelected for a term of two years, at an increase in salary.

—Supt. S. C. Skaaland of Waterville, Minn., has been reelected for a fifth consecutive year.

—Supt. T. P. Walker of Honey Grove, Tex., has been reelected for the next year. The schools have had a steady growth during his incumbency and important changes and improvements have been made from time to time.

—Supt. F. L. Mahannah, of Monticello, Ia., has been reelected for a three-year term. He has completed two years of satisfactory service in the schools.

—Supt. E. L. Weaver, of Clarinda, Ia., has been reelected for a three-year term. Mr. Weaver has completed a long term of service in the schools.

—E. C. Glass has filled the office of superintendent of the Lynchburg, Virginia, schools for 46 years.

—Governor Gifford Pinchot, of Pennsylvania, has been asked by Thomas E. Mitten, of Philadelphia, to call back and reinstate Dr. T. E. Finegan as state superintendent of public instruction. The Philadelphia Ledger makes the following comment: "The difficulties which Governor Pinchot has encountered in his nationwide search for an educator of standing to take Dr. Finegan's place and the unwillingness of those whom he has approached to come to Pennsylvania under the circumstances must have long since convinced the governor of the seriousness of his mistake. By now offering to recall Dr. Finegan to the service of the state, in his old position, Governor Pinchot would not only redeem a wrong but would reveal a bigness of mind and soul, as Mr. Mitten has indicated, justifying the support which the people of Pennsylvania have given him. Will Mr. Pinchot rise to his great opportunity?"

—Frank S. Tisdale has announced his resignation as superintendent of the Watertown, N. Y., schools.

### WHY WOOD DECLINED THE OFFER

When Governor Pinchot offered the state superintendency of Pennsylvania to Will C. Wood, now state superintendent of California, the good people of one state felt startled and those of the other felt flattered. California paid Wood \$5,000. Pennsylvania offered him \$12,000.

Then California realized that it had an educational prize, but Pennsylvania was undecided whether it ought to welcome an outsider or not. Dr. Thomas E. Finegan, who had been imported from New York for a similar purpose, was not popular.

Mr. Wood declined the offer for two reasons. He says: "First, the Pennsylvania situation is complicated by a breach between the governor and the school leaders. I doubt whether it would be possible for me to heal this breach, thus enabling me to put over a constructive program of education."

"In the second place, the school situation here in California is such that I feel that I should not leave it at the present. Evidences multiply that the forces of reaction, anxious to attack the educational program for which I have stood during the last eleven years, are awaiting my resignation with intent to undo so much of the achievement of California in school affairs as they can."

"I shall not quit my office with snipers in the rear."

### CALAMITOUS SCHOOLHOUSE FIRES

—Q. I have recently read about the Babbs Switch, Oklahoma, schoolhouse horror. In a recent editorial you mention the schoolhouse fires of Collinwood, Ohio, Peabody, Mass., and Camden, S. C. Can you tell me more about them?

A. The facts regarding the three fires mentioned are the following:

Collinwood, O.—Lakewood School.

Date of fire—March 4, 1908.

Deaths—160 children.

Causes—Lack of fire stops, inadequate exit doors, lack of fire-exit door latches, poor exit construction; result panic. (See article in April, 1908, issue of the Journal.)

Peabody, Mass.—St. John's Parochial School.

Date of fire—October 28, 1915.

Deaths—21 children.

Causes—Condition of basement, lack of fire protection devices; non-fireproof construction of building; result panic.

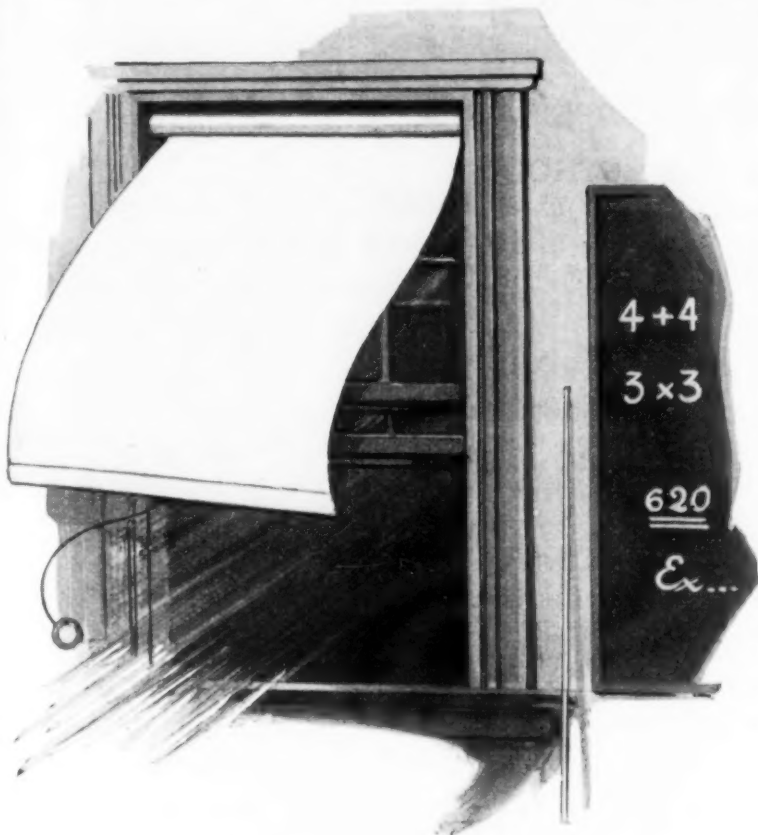
Camden, S. C.—Cleveland School, ten miles from Camden.

Date of fire—May 17, 1923.

Deaths—77 persons—pupils and parents.

Causes—Insufficient exits; improper staircase facilities; oil lamp for lighting; result congestion and panic on stairs.

# TONTINE



## *Tontine shades for sudden showers*

WARM spring breezes—open windows—sudden showers slanting in and drenching the shades!

No matter. Du Pont Tontine shade cloth is absolutely waterproof. The quick shower has merely given the shades a bath, and when the sun comes out they dry off unwrinkled and unharmed.

Tontine shade cloth is impregnated with pyroxylin, instead of the old-fashioned clay or paste "filling." When your Tontine shades get dirty, soap and water make them like new.

Why not send those old sagging school room shades to the discard? Re-equip this summer with Tontine—superior in every way, economical because of long satisfactory service.

*Write us for samples, and the name of our nearest dealer.*

**ORDINATOR COMPANY, Inc.**

*Sole Distributors*

233 East 41st Street

Chicago Office: 241 West Van Buren St.

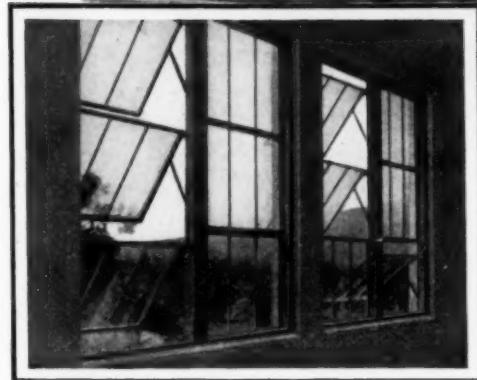
New York

**DU PONT  
TONTINE**

***Tontine Shades Wash!***



*Conaty Memorial School,  
Los Angeles, Calif.  
Truscon Donovan  
Awning Type Windows.*



*Any area desired can be  
affected for shading or  
ventilation with this type  
window.*

## What Happens to Daylight When You Draw the Shade?

Truscon Donovan Awning Type Windows are the perfect window for schools. They are durable and attractive and they safeguard eyesight and general health through proper daylighting and natural ventilation. In ordinary windows the drawn shade excludes light, often over the whole area of the opening. In Truscon Donovan Awning Type Windows the individual shading of sashes allows exclusion of direct sunlight without materially affecting the admission of daylight. Awning comfort, protection to eyes and hundred per cent ventilation area are possible with these ideal school windows. The sashes may be operated separately or all actuated simultaneously with the lower one.

### Consult Truscon Before Building

Truscon specialists will confer with you on your building program and aid in securing a satisfactory and economical window installation.

*Write for Catalog and information.*

**TRUSCON STEEL COMPANY, Youngstown, Ohio**

Warehouses and Sales Offices in Principal Cities  
Canada: Walkerville, Ont. Foreign Div.: New York

**TRUSCON**  
**STEEL**  
**DONOVAN**  
**AWNING TYPE WINDOWS**



# Smith's IMPROVED PANIC EXIT LOCKS

*Smith's Improved Exit Locks Are the Best Locks Made for Schools, Theatres, and Industrial Plants*

## The GRAVITY Principle

Our Gravity Exit Lock is the most perfect Mechanical Expression of the Exit Lock Idea that has ever been developed. It is the Exit Lock with Two Locks and without a single Spring in either Lock.

## The LEVER Principle

It is the Exit Lock with Lever Action at the Cross-bar to open the Door. There is No Spring Action and no Spring Tension. It is the One Exit Lock of Unfailing Operation, built on Everlasting Principles for Everlasting Service.

96 Schools in Baltimore equipped with Smith's Improved Panic Exit Locks



Baltimore City Public School No. 65  
ED. H. GLIDDEN, Architect

## SCHOOL BOARDS

use them because they give the protection wanted.

## ARCHITECTS

specify them because they have become the acknowledged standard.

## CONTRACTORS

desire them because they are easily installed and do not get out of order.

Write for Catalog



*There can be only one best of anything*

**Smith's  
Panic Locks  
Are the Best**

NOW  
MADE  
BY

**The Steffens-Amberg Co.**  
Newark, New Jersey

## THE HANSEN SYSTEM

AUTOMATIC PROGRAM

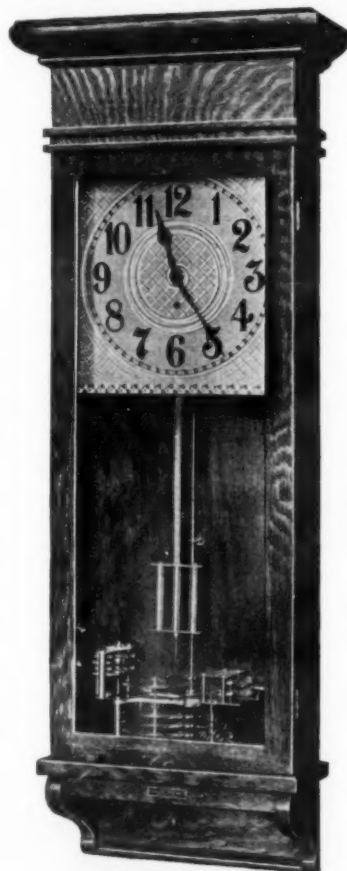
### FOR SCHOOLS, COLLEGES AND UNIVERSITIES

Hansen Automatic Program Systems are used in hundreds of schools throughout the country. Their simplicity and accessibility assure low cost of upkeep, absolute satisfaction and years of dependable service.

The extreme accuracy, moderate price and practical trouble-free operation of the Hansen System is sure to appeal to School Officials who desire a thoroughly flexible and reliable program system.

Let us send you a copy of our catalog.

**HANSEN MFG. CO.**  
PRINCETON, INDIANA



MODEL B, TYPE 1  
A BETTER AND CHEAPER  
COMPLETE SYSTEM  
NO BATTERIES TO TAKE  
CARE OF

Use the Norton Liquid Door Closer with Hold-Open Arms and do away with door stop on bottom of door.



### WHY Is The NORTON Closer With Hold-Open Arms the Best Suited for Schoolhouse Work?

**1st.** The doors are closed with a uniform speed, which gives the pupils a chance to go through a door without getting caught or injured.

**2nd.** Having two speeds, the speed at the latch can be set for

absolute quiet—no latch necessary.

**3rd.** The Hold-Open Device connected with the arm of the Door Closer is automatic, a child can operate it—just a push or pull on the door is all there is to do it. Does away with door stop, hook or strap to hold the door open.

Every school-room should have one.

**Service:**—We have expert service-men on call, free of charge.

**Price:**—The price is right. Send for a representative.

**THE NORTON DOOR CLOSER CO.**

2900-2918 N. Western Avenue,  
Chicago, Illinois.

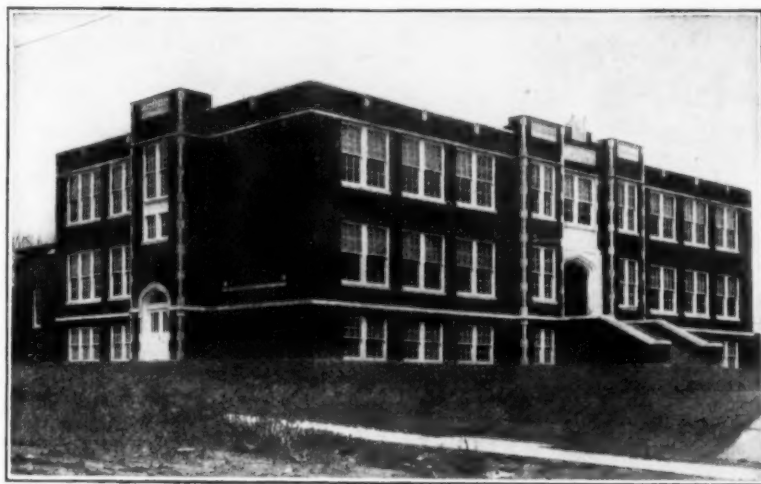


## ELECTRIC TIME and PROGRAM CLOCK SYSTEMS

The cut shows a recent Landis installation, consisting of Master Clock, Program Machine, Program Bells, Secondary Clocks, Storage Batteries, Charging Equipment, etc.

This School has recognized the merits of Landis apparatus and is now enjoying the benefits of an installation of this kind.

Let us go into the matter with you for that new School. Write today for literature. Ask your Architect to specify Landis apparatus and see that it is installed under Landis supervision, insuring quality, economy and service. Write nearest office.



*A Recent Landis Installation  
High School, Byesville, Ohio  
F. S. Rusk, Archt., Columbus, O.*

### LANDIS ENGINEERING AND MANUFACTURING COMPANY

423 Board of Trade Bldg.,  
Indianapolis, Ind.

Waynesboro, Pa.

## School Board Rules as an Expression of Administration Policies

*How the Rules of Boise, Idaho, Have Been Modernized in Keeping With the Administration of the Schools*

The rules of a board of education are perhaps the best official expression which can be given to the spirit and the method of the administration. It is not difficult to determine from a general reading of the rules, whether a board of education has a clear grasp on its administrative functions, and whether its superintendent of schools is, as he should be, the professional executive of the school system. Similarly, it is not difficult to learn whether the members of the board through their committee action interfere with the professional prerogatives of the superintendent, and whether the secretary is an independent, co-ordinate, or subordinate officer of the superintendent.

An interesting revision of the rules, intended to express the policies and the actual practices of the board of education of Boise City, Idaho, was made in January, 1925. In this revision the new rules make the superintendent of schools the chief executive of the school system, with authority to employ teachers and to conduct the educational work of the schools, subject to carefully arranged checks and balances, and with due allowance for the approval and veto powers of the board of education. The rules recognize the clerk as an expert in business matters, with certain functions prescribed by law and other functions imposed by the board, but dependent in educational matters upon the approval of the superintendent as the chief school executive.

The rules also outline a salary schedule which expresses a splendid educational policy, insuring a high grade of efficiency in the appoint-

ment and promotion of teachers, and in their educational growth and service.

The new rules read as follows:

#### RULES AND REGULATIONS ARTICLE I—Functions

The board of Education shall exercise all the powers, duties, responsibilities and obligations given to it by law. The primary function of the Board is the determination of general policies for, and the exercise of general supervision of the public schools, but the detailed administration thereof shall be carried out by its officers and employees. It shall hold its chief executive officer responsible for the efficient administration and supervision of the entire system. Individual members of the Board shall exercise no executive authority except as provided for, or delegated to members of committees, by these rules or by specific action of the Board.

#### ARTICLE II—Organization

The Board of Education shall, at its first meeting after the biennial school election, elect a President and a Vice-President from among its members, and also a Clerk and a Treasurer who may or may not be a member of the Board. Each of the officers shall hold office for a term of two years and until his successor is elected and qualified.

#### ARTICLE III—Meetings

Section 1. The Board of Trustees shall hold its regular meetings in the office of the Board, on the second Monday of each calendar month, at 7:30 P. M. from October 1st to April 1st, and at 8 P. M. during the remainder of the year, unless a different time and place shall be agreed upon or ordered by the Board. Special meetings may be held at any time upon call of the President, or, in his absence, the Vice-President, or by two members of the Board. Notice of special meetings shall be given by the Clerk to each member of the Board, either by letter addressed to him and deposited in the post office at least twenty-four hours before such meeting,

or personally, or by telephone at least three hours before such meeting. In all calls for special meetings the place, hour and purpose of meeting shall be stated, and such meeting may be held at the time and place stated in the call therefor.

Sec. 2. The following order of business shall be observed:

1. Roll Call.
2. Reading of Minutes.
3. Communications.
4. Reports or Communications from the Superintendent, Clerk, Treasurer, and other administrative officers.
5. Reports of Committees.
6. Claims and action thereon.
7. Unfinished Business.
8. New Business.
9. Adjournment.

Sec. 3. The majority of all members shall be necessary to constitute a quorum for the transaction of business.

Sec. 4. Upon the request of one member, the "yeas" and "nays" shall be taken upon any motion before the Board and the vote entered upon the minutes. Each member present shall vote "yes" or "no" upon all questions, unless excused by the Board.

Sec. 5. Except as herein otherwise specified, the proceedings of the Board shall be governed by the rules prescribed in Roberts' Rules of Order.

#### ARTICLE IV—President

The President shall perform the duties incumbent on him by statute, enforce the rules, sign all documents ordered executed by the Board, direct the attention of the Board to the duties required of it by law at the proper time for its action, and perform such other duties as pertain to his office or may be enjoined by the Board.

#### ARTICLE V—Vice-President

The Vice-President shall perform the duties and functions of the President during the absence or inability of the President to act and such other duties as may be delegated to him by the Board.

#### ARTICLE VI—Clerk

Section 1. The Clerk, before entering upon his duties, shall execute a bond in such sum as directed by the Board, conditioned upon the faithful discharge of his duties and delivery to



# Boy-Proof and Dirt-Proof— Air-Dry, Ideal Lavatory Equipment



School boards and school officials all over the country have been most enthusiastic about that new and economical equipment for lavatories—Airdry.

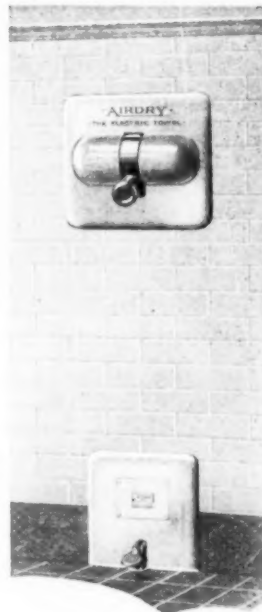
Airdry is a beautiful snow-white machine that includes an electric motor, a heating element and a fan—all enclosed in a porcelain enamel case and controlled by a conveniently located foot pedal. A rush of warm air dries your hands and face Na-

#### LEADING SCHOOLS THAT HAVE SPECIFIED AIRDRY

Minneapolis Public Schools, Chicago Public Schools, Buffalo Public Schools, University of Chicago, Pittsburgh Public Schools, New Trier Township High School, Palo Alto Union High School, Harvard University, Columbia University, Wellesley College, Cornell University, Crane Technical High School, Haugan School, Modesto High School, Philadelphia Free Library, Art Institute of Chicago, Field Museum, Chicago.

ture's way—by evaporation. The machine comes in two types, the pedestal and the recessed wall type specified by leading architects for new school buildings, libraries, and public buildings everywhere.

It is the ideal washroom equipment because it effects a great saving in towels and is one hundred per cent sanitary. Write for complete information, plans and specifications.



## THE AMERICAN AIRDRY CORPORATION

7720 South Chicago Avenue

Chicago, Illinois

his successor in office, of all district property pertaining to his office.

Sec. 2. The Clerk shall perform the duties imposed upon him by law; he shall notify the members of the Board of all meetings of that body, have charge of the office of the Board and be responsible for the records, seal, papers and documents of the district.

Sec. 3. He shall attend all meetings of the Board, keep accurate minutes of its proceedings, and when required shall attend the meetings of any committee and make such report of its proceedings as such committee may direct. He shall also, at the request of the chairman of any committee, notify the members thereof of the time, place and purpose of any meeting of such committee.

Sec. 4. He shall cause the property of the district to be insured in the name and for the benefit of the district in such amounts and with such agents as the Board may direct, and he shall keep a record of all such insurance.

Sec. 5. All claims against the district shall be presented to the Clerk. He shall examine all bills or claims and shall certify whether the expense has been specially authorized by the Board or any committee or officer of the Board, before presenting the claim to the Board, and shall further certify as to the correctness of each claim.

Sec. 6. The Clerk shall, as often as required, report to the Board the condition of the school funds and shall make such special investigation of any claims, account of other matter as may be directed by the Board.

Sec. 7. The office of the Clerk shall be open from 8:30 A. M. to 5:00 P. M., Saturday afternoons and legal holidays excepted.

Sec. 8. The Clerk shall prepare the payroll from his records and from information given him by the Superintendent or the Board.

Sec. 9. It shall be the duty of the Clerk to issue checks or warrants in payment of all bills allowed by the Board, such checks or warrants to be countersigned by the President and by the Treasurer.

Sec. 10. He shall prepare a monthly statement showing the condition of budget balances at the end of each month, such statement to be submitted to each meeting of the Board.

#### ARTICLE VII—Treasurer

Section 1. The Treasurer shall furnish bond in such amount as required by the Board and

shall perform the duties prescribed by law, and such other duties as may be delegated to him by the Board.

Sec. 2. The Treasurer shall countersign all checks or warrants issued by the Clerk in payment of bills.

Sec. 2. The Treasurer shall keep the funds and securities of the district deposited in such bank or banks as may be designated by the Board, and shall keep an accurate record thereof, and shall require sufficient bonds other than personal bonds, or securities approved by the Board, from such banks as will at all times fully protect the funds and securities so deposited.

Sec. 4. The Treasurer shall make a report to the Board at each monthly meeting of the condition and amount of the funds of the district.

#### ARTICLE VIII—Committees

Section 1. The Board shall provide for the appointment of such special committees from time to time as may be deemed necessary or advisable.

Sec. 2. The Board shall have one standing committee designated the Committee of the Whole. The Committee of the Whole shall meet at such times and places as it may elect for the consideration of any business or problems relating to the schools. The President, Vice-President, or some other member of the Board designated by the President or those present shall preside at meetings of the Committee. A report of the Committee of the Whole shall be submitted at the next regular or special meeting of the Board.

#### ARTICLE IX—Budget

The budget system of finance for the schools of the district is adopted as a settled policy.

#### ARTICLE X—Audit

The Board shall provide for a complete audit of the books and financial affairs of the district at the end of each fiscal year, by a competent accountant.

#### ARTICLE XI—Superintendent

Section 1. The Superintendent shall be the executive officer of the Board, and shall be responsible to it for the execution of its policy, and for the faithful and efficient observance of its rules.

Sec. 2. He shall attend all meetings of the Board and shall have the privilege of taking part in the deliberations, but shall have no vote.

Sec. 3. He shall prepare and submit to the Board for approval rules and regulations, statements of policy, programs, and additional facilities requiring action by the Board which he believes needed for the proper control and functions of the Board and management of the schools.

Sec. 4. To assist the Board in establishing policies and in performing its duties, the Superintendent shall, when requested by the Board, place before the Board, the Committee of the Whole, or any special committee, necessary and helpful facts, comparisons, investigations, information and reports.

Sec. 5. He shall recommend to the Board the courses of study to be pursued and the text books and apparatus to be used.

Sec. 6. He shall nominate for appointment all principals, supervisors and teachers and assign them to their various positions and recommend salaries to be paid, subject to the schedule adopted by the Board. He shall also recommend the dismissal of teachers who are found to be incapable or unworthy.

Sec. 7. He shall have general supervision over the work of the Superintendent of Buildings and Grounds and the Purchasing Agent.

Sec. 8. He shall be responsible for preparing and submitting to the Board, not later than the regular meeting in April, a tentative budget for the ensuing fiscal year, and a final detailed budget for the same year not later than the regular meeting in June.

Sec. 9. He shall recommend to the Board for approval transfers from one budgetary appropriation to another as conditions may require. He shall have power to approve and direct purchases and expenditures within the limits of the detailed budget approved by the Board.

Sec. 10. He shall at the end of each year make a careful, accurate, and complete report of the condition of the schools in the district. Such report may be printed in such numbers and at such expense as the Board may direct.

#### ARTICLE XII—Purchasing Agent

Section 1. The Purchasing Agent shall be appointed by the Board upon the nomination of the Superintendent, at such salary as the Board may determine. The Clerk may be appointed to fill such position.

(Continued on Page 131)

STANDARD OF



THE WORLD



In ordering the furnishing and erection of a good school fence you are justified in considering the manufacturers' service as well as his product.

CINCINNATI  
**Stewart**  
IRON & WIRE **FENCES**  
NEW YORK  
**Afco**

are the products of two associated companies, both of which have for many years been building special fences for school purposes. It has been our privilege to be entrusted with some very notable work and to carry through a great many jobs of school fence building with dispatch. There have been sound reasons for this. It is always our endeavor to maintain Service on a plane fully as high as the Quality of our product. Among some of our recent work have been fences for:

|                               |                             |
|-------------------------------|-----------------------------|
| Dartmouth College             | Ithaca, N. Y., High School  |
| Girls' High School            | Smith College               |
| Augusta, Georgia              | Northampton, Mass.          |
| Princeton University          | Detroit High School         |
| National Park Seminary,       | Leaville-McCampbell         |
| Forest Glenn, Maryland        | School, Graniteville, S. C. |
| Columbia University           | New York City Schools       |
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We furnish and erect (when desired) a complete variety of styles and designs of fencing and gates:—

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| Wrought Iron Fences   | Playground Fences       |
| Athletic Field Fences | Tennis Court Enclosures |
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Catalogs on Request—or our near-by representative will be glad to consult with you.

**The Stewart Iron Works Company**

INCORPORATED

219 Stewart Block, Cincinnati, Ohio  
and in the Eastern States

**American Fence Construction Co.**

INCORPORATED

128 West 34th Street, New York, N. Y.  
Agents and Representatives in all Principal Cities



CHAIN LINK

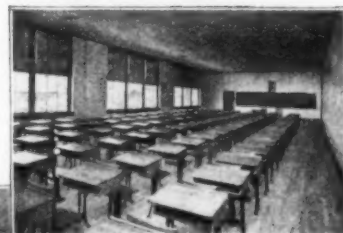


WIRE FENCE



## You are interested in School Equipment

OAK FLOORS meet the four-fold test of Sanitation, Permanence, Economy, and Beauty.



A sanitary floor is a prime requisite in school equipment. Hundreds of feet tramp in and out daily, tracking dust and dirt; movements of children in a body from room to room keep disease breeding germs in motion.

Every day should find school floors bright and clean. This is easily possible with floors of Oak, laid in tight continuous strips, with no cracks to collect dirt, and with a polished surface that makes cleaning easy.

### Permanence

As a matter of expense, permanence is as important as sanitation from the health point

of view. Oak floors will last; with minimum care they keep in perfect condition; they never need replacement. Without question, Oak is the economical floor.

### Beauty

When to these advantages, we add the beauty of Nature's own product, we have the ideal floor for schools. Children recognize the beauty in Oak. An appreciation of the beautiful is developed from daily contact with Nature's handiwork.

### Valuable free literature

Send this coupon for literature, showing the new color finishes and containing data valuable to those responsible for the equipment and maintenance of schools.

OAK FLOORING BUREAU, 867 Hearst Bldg., Chicago  
Send me "The Story of Oak Floors," and other useful literature.

Name.....

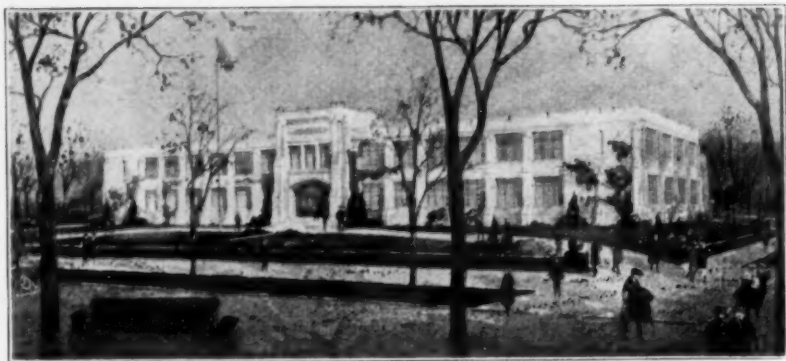
Address.....

City.....State.....

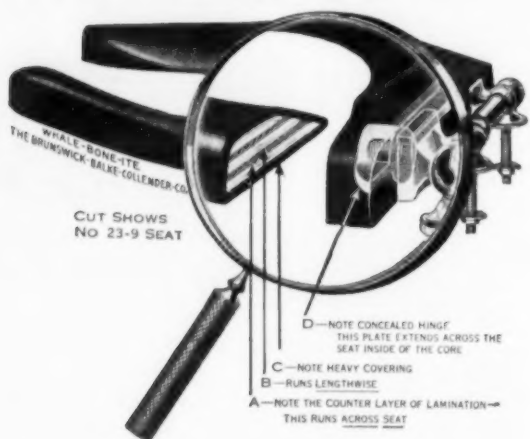




# Whale-Bone-Ite Toilet Seats



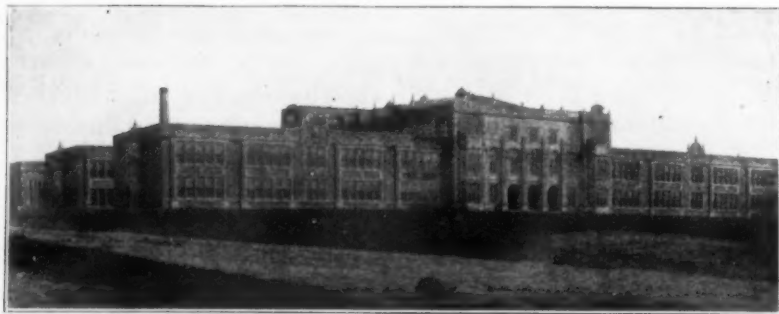
OAKMONT HIGH SCHOOL, Oakmont, Pa.  
W. G. ECKLES & Co., Architects, New Castle, Pa.  
W. T. WITHERS & SONS, Plumbers, New Castle, Pa.  
STANDARD HARDWARE MFG. CO., Jobbers, Pittsburgh, Pa.



## The Reason Why



**They Stand the Gaff**  
*Sanitary, Durable  
Easily cleaned*



THE ROOSEVELT HIGH SCHOOL, Des Moines, Iowa  
PROUDFOOT, BIRD & RAWSON, Architects, Des Moines, Iowa  
VAN DYCK HEATING AND PLUMBING CO., Des Moines, Iowa  
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THE BRUNSWICK-BALKE-COLLENDER CO.  
1623 S. WABASH AVE. CHICAGO

# Bradley Washfountains

PROMOTE BOTH  
CLEANLINESS AND  
SANITATION  
REQUIRE BUT A  
MINIMUM OF  
JANITOR SERVICE

*"The First Cost is the Last Cost"*



Bradley Washfountains represent a great advance in modern washroom equipment. They promote both cleanliness and sanitation, are self cleaning and require but a minimum of janitor service.

And Bradley Washfountains are most economical. Their use reduces the number of fixtures required. They save floor space, use less water, and permit the use of fresh tempered water at all times.

For use in Schools, Colleges and Universities and in every type of public lavatories, there is no fixture equal to the Bradley Washfountain in utility, durability and beauty and in economy of operation and maintenance.

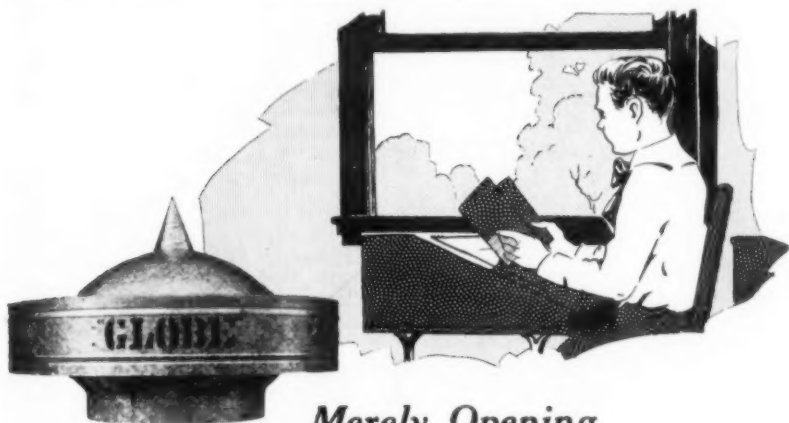
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**BRADLEY WASHFOUNTAIN CO.**  
Milwaukee Wisconsin

### A FEW RECENT INSTALLATIONS

|                              |                         |                             |
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| Crane Technical High School, | Marquette University,   | Fond du Lac High School,    |
| Tilden High School,          | Shorewood Grade School, | Fond du Lac, Wis.           |
| Schurz High School,          | Continuation School,    | High School,                |
| Austin High School,          | Milwaukee, Wis.         | Stevens Point, Wis.         |
| Morgan Park School,          | Fortuna Grade School,   | South Omaha High School,    |
| Chicago, Ill.                | Fortuna, Calif.         | South Omaha, Nebr.          |
| Garvey School,               | Washington Ave. High    | High School,                |
| Los Angeles, Calif.          | School,                 | Janesville, Wis.            |
| Theodore Roosevelt Junior    | Canton, Ohio            | Woodland Union High School, |
| and Senior High School,      | High School,            | Woodland, Calif.            |
| Amsterdam, N. Y.             | Green Bay, Wis.         |                             |

AND MANY MORE.



**Merely Opening  
Windows is NOT Providing Ventilation**

Proper ventilation of a school building is the result of a plan to provide FRESH AIR in every part of the building at all times—whether the windows are open or closed—irrespective of weather conditions—winter and summer.

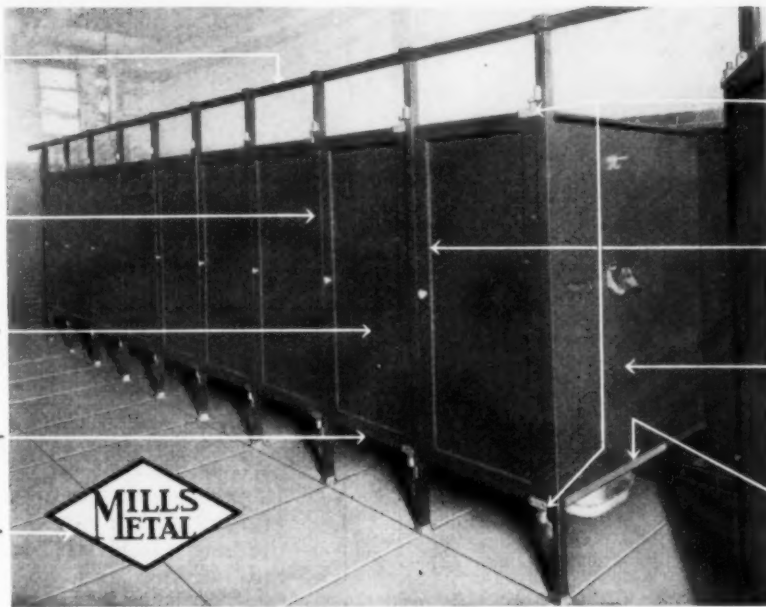
## "GLOBE" Ventilators

are the simple "suction" type that have an unusually large exhaust capacity. They operate perfectly under all weather conditions. There is nothing to turn, or twist, or rust, or freeze, or rattle, or break, or get out of order. They cannot clog with snow, or leak in the hardest rain. And they are built to last as long as the building itself.

Send for catalog and list of prominent schools that are "GLOBE" equipped—then talk with your architect.

**GLOBE VENTILATOR CO.**

Department J, Troy, N. Y.

**Rigidity****Durability****Appearance****No Sagging****Quality****Strength****No Cracks  
to catch  
Dirt****Cleanliness****No Corners  
to collect  
Dust**

St. Thomas School—Cleveland.

W. C. Jansen, Architect.

**Every Advantage - Without a Single Flaw.  
Mills Metal Toilet Partitions Stand Supreme.**

Approach the subject from any viewpoint. They excel.  
Quality? Absolutely! Endurance? The strongest!  
Design? They challenge comparison. Adaptability? Extremely so.  
Economy? Easy to prove.  
Details and cooperation? A Mills Representative in all principal cities.  
Write or wire us. Mills service is at your command.

## The Mills Company

5230 ST. CLAIR AVENUE



CLEVELAND, OHIO

(Continued from Page 128)

Sec. 2. It shall be the duty of the Purchasing Agent to purchase equipment, apparatus, and supplies for the district, under the direction of the Superintendent, within the limits of the budget, or with the approval of the Board.

Sec. 3. He shall assist the Superintendent in the preparation of the annual budget.

Sec. 4. He shall perform such other duties as the Superintendent and Board may direct.

### ARTICLE XIII—Superintendent of Buildings and Grounds

Section 1. The Superintendent of Buildings and Grounds shall be appointed by the Board upon the nomination of the Superintendent, for such salary as the Board may determine.

Sec. 2. It shall be the duty of the Superintendent of the Buildings and Grounds to have supervision of all buildings and grounds in the district and the improvement and repair thereof, under the direction of the Superintendent within the limits of the budget, or with the approval of the Board.

Sec. 3. He shall, at the end of each fiscal year, make a complete report of the condition of the buildings and grounds of the district, and he shall make recommendations as to painting, repairs or alterations needed and furnish estimates of the costs thereof for the annual budget.

Sec. 4. He shall employ janitors and recommend salaries to be paid to them, subject to the approval of the Superintendent and the Board.

Sec. 5. Subject to the general direction of the Superintendent of Buildings and Grounds, each janitor shall follow the directions of the principal of the school in which he is employed in performing his specific duties.

Sec. 6. The Superintendent of Buildings and Grounds shall perform such other duties as the Superintendent and Board may direct.

### ARTICLE XIV—Attorney

The Board may employ a competent attorney when necessary to represent the district and such officers and employees of the district as the Board shall direct, in any legal matter in which the district or such officers or employees may be interested as such. Such attorney shall file with the Clerk a copy of each written opinion given by him to the Board or any member or employee thereof.

### ARTICLE XV—Tuition

Section 1. The charter of the Independent School District of Boise City provides that the Board of Trustees of said district shall have the power and it shall be their duty: "to prescribe and fix the rates of tuition for all non-resident pupils of said district, provided that no non-resident pupil shall be admitted to the schools of said district without paying in advance at least one month's tuition as fixed and determined by said Board."

RESIDENCE. Every person has, in law, a residence. In determining the place of residence, the following rules are to be observed:

1. It is the place where one remains when not called elsewhere for labor or other special or temporary purposes and to which he returns in seasons of repose.

2. The residence of the father during his life, and after his death the residence of the mother, is the residence of the unmarried minor child.

3. The residence of an unmarried minor who has a parent living, cannot be changed by either his own act or that of his guardian.

Sec. 2. If it appears to the satisfaction of the Board that the parents or guardian of a pupil are not financially able to pay tuition fees, or that the pupil is abandoned by his parents and such pupil is permanently living with a resident (although not formally adopted by such resident, and although his parents or guardian are non-resident), such pupil shall be exempted from the payment of tuition fees; or, if it appears to the satisfaction of the Board that a pupil is permanently residing and to all intents and purposes making his home with a resident of the district and is supported by and at the expense of such resident, except as supplemented by the pupil's own labor, such pupil (although not formally adopted by such resident, and although his parents or guardian are non-residents), shall be exempted from the payment of tuition fees. Affidavits of the parents or guardian or of reputable citizens may be required by the Board to prove or establish the facts under which exemption from payment of tuition fees is claimed under any of the foregoing provisions.

Sec. 3. Non-resident pupils whose parents pay taxes on property owned within the district, shall be credited on their tuition fees with the amount of school taxes paid by such parent the

year preceding the application for admission in the schools. Proper proof of the amount of school taxes paid must be furnished by the parent.

### ARTICLE XVI—Salary Schedule for Teachers

Section 1. General Policy. The Board of Education recognizes teachers as members of a distinct profession and their work as the highest form of public service. Nominations for positions are made by the Superintendent of Schools. Those best fitted in health, training, experience, personality, and character will be chosen. Consideration for the welfare of the boys and girls in the school will govern in all cases.

| Sec. 2. Schedules: | Grades    | High School |
|--------------------|-----------|-------------|
|                    | \$1200.00 | \$1500.00   |
|                    | 1260.00   | 1560.00     |
|                    | 1320.00   | 1620.00     |
|                    | 1380.00   | 1680.00     |
|                    | 1440.00   | 1740.00     |
|                    | 1500.00   | 1800.00     |
|                    | 1560.00   | 1860.00     |
|                    | 1620.00   |             |

### Sec. 3. Supervisory Positions:

(a) Building Principalships, conditioned upon the number of rooms in the building, experience and special training — maximum, \$1860.00.

(b) Heads of departments in High School—\$1800.00 to \$2200.00.

(c) General supervisors, upon recommendation of Superintendent.

### Sec. 4. Conditions of Permanent Schedule:

#### 1. Professional Training:

(a) Grade Positions—Two years above High School, graduation from an approved Normal School or equivalent.

(b) High School positions—Graduation from an approved four-year college, including special professional training, necessary to meet the requirements of an accrediting association.

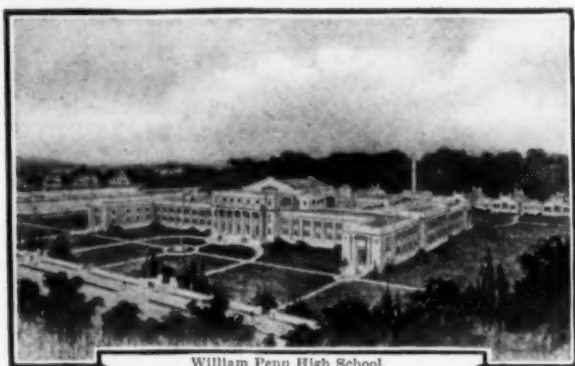
2. Experience: Two years prior to election in Boise schools.

3. Specialists in Manual Training, Agriculture, Commercial Subjects and Physical Education, not included in regular schedule.

4. Minimum of six weeks' school attendance, or equivalent, after five years' continuous service, and the same requirement during each five years of additional service thereafter.

5. Bonus for approved Summer School attendance:





William Penn High School,  
Harrisburg, Pa.  
Charles Howard Lloyd, Architect  
Eugene J. Fogarty &  
Herre Bros., Heating Contractors

### Harrisburg Prefers Webster Systems of Steam Heating

Harrisburg has chosen Webster Systems of Steam Heating ten times in the last 15 years for her fine school buildings. Here is the list:

|         |   |
|---------|---|
| 1909    | Hamilton School                                   |
| 1909    | Technical High School                             |
| 1911    | Melrose School                                    |
| 1911    | Woodward School                                   |
| 1914    | Schimmel School                                   |
| 1917    | Open Air School                                   |
| 1918    | Edison Junior High School                         |
| 1920    | Penn School (changeover of straight steam system) |
| 1921    | Boas School                                       |
| 1922-23 | William Penn High School                          |

More than 34,000 installations—37 years of experience—a policy of intelligent cooperation with school executives, architects, and heating contractors—a reputation for service built upon continued interest in Webster Systems after they are sold—these factors have influenced Harrisburg's choice.

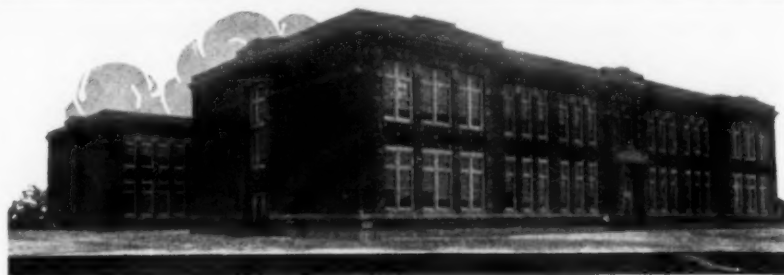
### Warren Webster & Company

Pioneers of the Vacuum System of Steam Heating

Camden, N. J.

46 Branch Offices

In Canada, Darling Bros., Ltd., Montreal.



Roosevelt High School, Oshkosh, Wis.  
Auler & Jensen, Architects

### SCHOOL HEAT AND VENTILATION

are problems that must be solved before the actual building is begun. The Roosevelt High School, Oshkosh, Wisconsin, is typical of the best in modern school structures. The heating and ventilating equipment consists of two Bayley Plexiform Fans and two Bayley Chinook Heaters delivering 72,000 cubic feet of fresh, heated air per minute.

If you are contemplating the erection of a school building, write for data and literature descriptive of the most improved methods of supplying, washing, humidifying and heating air in public and school buildings.

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# Bayley

### AIR ENGINEERING & EQUIPMENT

HEATING AND VENTILATING  
AIR WASHING AND HUMIDIFYING SYSTEMS  
MILL EXHAUSTERS—PRESSURE BLOWERS  
MECHANICAL DRAFT FANS  
AIR AND GAS SCRUBBERS  
INDUSTRIAL DRYING SYSTEMS



Six weeks—\$50.00 each year for three years.  
Twelve weeks or two terms—\$75.00 each year for three years.

Maximum bonus for any one year is \$75.00.

After any teacher has taught five years without attending a summer school or its equivalent, there shall be inserted in the next year's contract of such teacher the following statement: "The salary stated in this contract is subject to the condition that the teacher herein named shall meet the requirement of summer school attendance. Failure to meet this condition will cause a reduction of sixty dollars from the annual salary named."

6. The Board of Education, on recommendation of the Superintendent, may employ new teachers on any step of the salary schedule.

7. Salary increases in all cases and at all times are determined by the Board of Education. There are no automatic increases in salary.

#### ARTICLE XVII—Payment of Teachers

Section 1. The School Year. School opens on Tuesday following Labor Day and is in session thirty-eight weeks.

Sec. 2. Payment of Teachers' Salaries. Teachers are paid one-twelfth of the annual salary on the fifth day of each calendar month except July and August. They receive the tenth and eleventh (June and July) installments of salary at the close of the school year in June; and the final (August) installment on September 5, provided,

(a) That, any teacher who renders less than a year of service shall receive such a proportionate part of his total salary for the year as number of days actually taught by him bear to the total number of days in the school year.

(b) That, teachers who sever their connection with the schools at the close of the school year receive payment in full at that time.

(c) That, in case resignation is made after July 1st and prior to payment of the twelfth installment the teacher shall at the discretion of the Board of Education forfeit one-half of such installment.

Sec. 3. Payroll. Teachers and all others on the regular payroll of the schools are paid by deposit in a Boise bank to the credit of the payee. Each teacher and regular employee must personally designate his bank in the office of the Clerk not later than the close of the second week of the school year.

Sec. 4. Time Allowance for Personal Illness of Teacher and Allowance for Illness or Death in Immediate Family of Teacher. Regular teachers are allowed full pay for absence caused by personal illness or by illness or death in the immediate family of a teacher not to exceed ten days in all during any school year, and not more than two days shall be for absence other than the personal illness of the teacher, provided,

(a) That any teacher who is out more than ten days on account of personal illness in any year may be allowed unused sick leave allowance of previous two years. In no case, however, shall the total sick leave under this provision exceed twenty days for the year.

(b) That any teacher who does not render a full year of service shall be entitled to one day for each month or fraction thereof actually taught. No deductions are made from any installment of the teacher's salary until the full ten-day allowance of absence has been attained by the teacher.

(c) Deductions from the teacher's salary for absence in excess of the ten days herein specified are made on the basis of actual amount received by the teacher for a school day. Such deductions, except when in excess of the teacher's accumulated reserve, are to be made at the June settlement.

Sec. 5. Visiting Day. Each regular teacher is allowed one school day each year on full pay to visit schools in other cities. (Arrangement in advance must be made with the Superintendent.) The expense of the trip is to be borne by the teacher who avails himself of this privilege.

#### ARTICLE XVIII—High School Auditorium

Section 1. Custody of Auditorium. The custody of the auditorium is placed in the principal of the High School subject to the supervision of the Board, and when it is not in session, to its President.

Sec. 2. Rentals. In renting the auditorium or permitting its use for other than school purposes, it will not be the purpose of the Board to make a profit from the use of the auditorium but a nominal charge fixed at \$50.00 for night use and \$40.00 for day use will be made to cover heat, light, janitor service, police and fire protection, stage manager and other actual disbursements. The use of the auditorium for rehearsal purposes may be made at a rental charge of

\$25.00 for day rehearsals and of \$35.00 for night rehearsals.

These charges may be waived or reduced by the Board, when, prior to use, application is made for the auditorium, under such a showing justifying the same as shall meet the approval of the Board; or when the cost would otherwise become a charge against the community.

Sec. 3. Purposes for which Auditorium May be Used:

(a) No use of the auditorium will be permitted which will in any way interfere with the activities of the public school.

(b) The policy of the Board will be not to compete with commercial halls and theatres.

(c) Generally speaking, it is the purpose of the Board to permit use of the auditorium as a community hall, having in mind the popular demand that Boise become a convention city and in view of the fact that other meeting places for large assemblages are not now available.

(d) Subject to the primary use of the auditorium for school purposes, the following are tentatively defined as proper uses:

1. Mass meetings called by public authorities or under the supervision of the Boise Chamber of Commerce.

2. Conventions (including those of political and religious organizations, business organizations and clubs and societies) where numerous attended and composed largely of delegates from out of town.

3. Lyceum courses where tickets are sold substantially at cost of talent and necessary advertising.

4. Concerts by the Boise Civic Festival Chorus where the proceeds are devoted to the interests of the community.

5. Lectures by noted speakers on popular subjects where the admission charges are the actual cost of talent.

6. Music by noted musicians where the admission charges are the actual cost of the talent.

7. Lectures of a semi-religious educational character where there is no admission charge or collection.

8. Lectures, plays or entertainments of any kind for raising money for organizations, clubs, lodges where such organizations are of a semi-benevolent character.

(Concluded on Page 140)

# E-Z

## RADIATOR HANGER

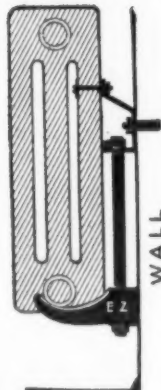
YOU'LL USE 'EM YET!

**Cut  
Cleaning  
Costs**

**D**ON'T slow up cleaning by making the janitor clean under inaccessible, leg-supported radiators!

In your new school, hang *legless* radiators from the wall, *well off the floor*, with E-Z Radiator Hangers. Speeds cleaning, improves sanitation and cuts cleaning costs. Used in thousands of schools. Write us and see your architect.

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E-Z Hangers  
leave ample  
room for cleaning



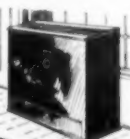
The picture shows Public School No. 210, Brooklyn, N. Y.—the first New York City school to be completely equipped with the Unit System of ventilation. This is the new standardized type of school building—with 84 Peerless Units.

The Peerless Unit System insures thorough ventilation for each room independently, without drafts. It is noiseless, easy to operate, and absolutely dependable. Adaptable to all steam systems; no remodeling required for old buildings. *Send for Catalogue.*

Peerless Unit Ventilation Co., Inc.

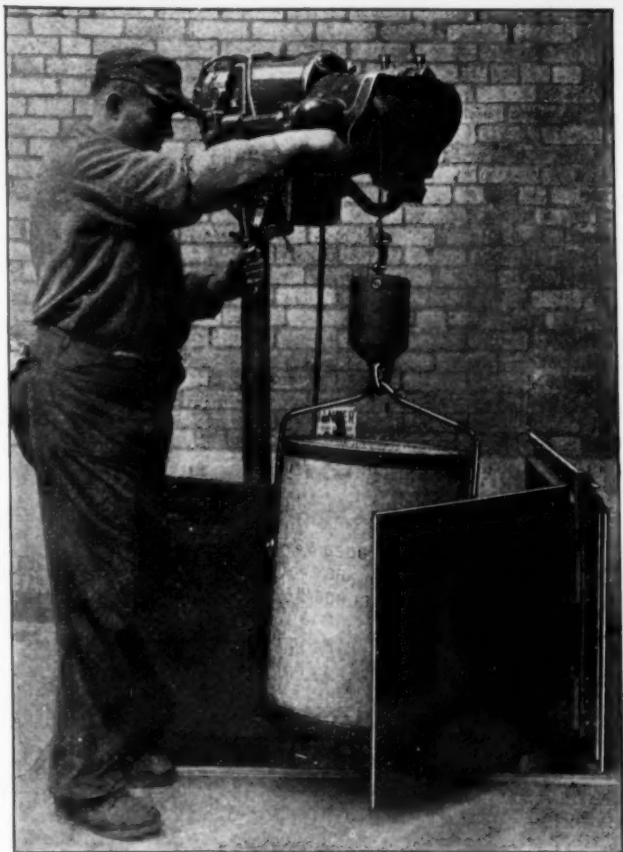
Skillman Avenue and Hulst Street, Long Island City, N. Y.

**PEERLESS**  
UNIT SYSTEM  
*Heating and Ventilating*



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Model E Hoist as installed for L. Blumstein, N. Y.  
Robert D. Cohn, Architect.

## In Ohio 131 Public Schools

are equipped for ash removal  
with G&G Telescopic Hoists.

**T**HE completely equipped Model E Electric Power Hoist illustrated, is very popular in large schools where there is a considerable quantity of ashes to be removed at one time or where the boiler room is deep. With it, one man can easily bring ashes to grade level. Tests for current consumption have shown that this model will raise as much as 15½ tons of ashes in one kilowatt hour. Distance between boiler room and grade level of course affects the amount of current consumed.

Where sidewalk opening permits truck to drive alongside, the Model D Electric Hoist is preferable, as its overhead crane makes it possible to deposit ashes directly in truck without rehandling at grade.

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**Telescopic Hoist**  
With Automatic Stop and Gravity Lowering Device

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**FIRESCAPE**

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Price only \$35.00 complete, F. O. B. Chicago.  
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8700 So. State St., Chicago.

Send type "A" FEDERAL SIREN for.....volts and if not pleased with it I will return it prepaid for credit.

Name of School.....

Address.....

City.....

My Name.....

Position..... (ASBJ-5)

**WILDER**  **WILDER**



No. 1582

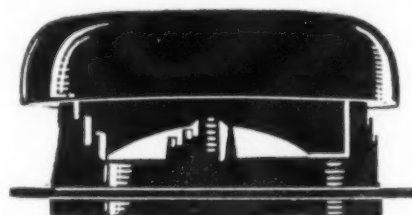
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Order through your jobber  
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A QUALITY DEVICE AT A POPULAR PRICE



THE PRICELESS VALUE of the BEST

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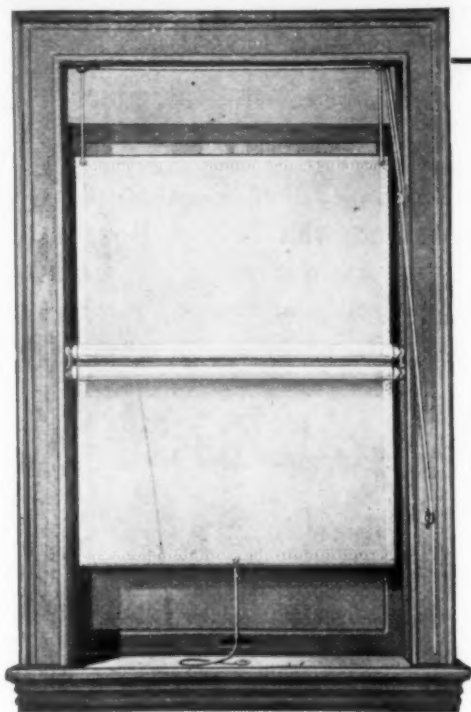
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Owner satisfaction with its reward of repeat business can result only from absolute satisfaction with the product supplied.

With less than the best this priceless good will may not be attained.

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Window Shades of Every Description Made to Order

### The AIRANLITE Double Roll Shade

MOUNTED ON PATENTED BRACKETS  
IS THE PERFECT SCHOOL SHADE.

It gives a correct and scientific diffusion of light and permits window ventilation.

It is easy to adjust and cannot get out of order—is strong and durable—good looking and well made.

AIRANLITE Double Roll Shades can be made of any standard shade cloth or of canvas.

For school shades our special woven tan colored canvas is recommended.

The Patented Adjustable Light Stop does away with streaks of light between rollers and the patented brackets hold shades in perfect alignment, giving the appearance on the outside, of being one continuous shade.



**For Long and Satisfactory Service Use AIRANLITE DOUBLE ROLL SHADES**

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**They Increase the Efficiency and Improve the Health of Teachers and Pupils.**

Write for Prices and Catalog.

**S. A. MAXWELL & CO., Inc.**

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Users of double roll shades are cautioned against infringements and imitations, as the AIRANLITE Patented Double Roll Shade is fully protected by U. S. Patents.

Be sure you get AIRANLITE Double Roll Shades mounted on AIRANLITE Patented Brackets.

#### PLANNING THE SUMMER'S REPAIRS

(Concluded from Page 36)

This may seem quite a formidable list of repair possibilities but sooner or later every school board will have some experience with every one of the sixteen. Little feet and little hands make good but rather hard use of school properties and repairs begin almost from the day the builder delivered the key; and no less destructive, possibly even more so, are the big boys and girls in the high school. Nevertheless, school buildings were built to use and as a result to wear out. Let school boards remember, then, as they are called upon to furnish this thing or that thing, or to rearrange something that seems to them well enough let alone, or to provide more or different light, or to do whatever it may be, that they are but improving or keeping in shape the most important building in the community. And let it also be remembered that repairs begun in time always mean a decided saving in the end.

#### SCHOOL JANITORIAL-ENGINEERING SERVICE

(Continued from Page 42)

This amount is what should be provided by the school board through the taxpayers in order that public school property may be preserved and properly taken care of, and proper environment provided for school children and teachers.

To illustrate the point I am trying to make, the following instance is recited:

In Minneapolis, the janitorial-engineering service in former years was based upon an arbitrarily determined amount of money set aside in the budget, which was based upon the average of the amount of money paid out to janitors and engineers over a period of previous years. No attention was given to whether the work had been, or was being done properly, or whether the men were being paid a living wage.

As a matter of fact, the school buildings were filthy and the men were receiving an average starvation wage of \$60 per month. For certain reasons the wage schedule was increased. What happened? In order to come within the budget, as it was impossible to reduce the salaries lower than they already were, the number of men was reduced, with the result that with fewer men even less work was done than before the change and the condition of the buildings became worse than ever.

It is clearly evident that such a procedure was absolutely wrong. When the school board of Minneapolis placed itself in a position where it was able to graphically show the amount of money was needed to pay a living wage to definitely determined number of men to be employed if a standard of service was to be maintained, the public was willing and ready to provide all the money needed.

And this brings us right back to the statement with which we started, namely, that satisfactory public school janitorial-engineering service is dependent solely upon the successful determination of the work to be done, the employment of sufficient man-power to properly do the work without exacting the last pound of flesh from the employees, and the payment of a good living wage, the responsibility for the administration of the entire service being vested in an officer of the board.

There is one difficult situation entering into the man-power problem in all school systems and that is to know what to do with the old men who should not be dismissed because of their faithful service for many years but who are too old and decrepit, or for some other reason unable to perform a full day's work. The capacity of these men to work cannot be figured by any prescribed formula, and the only thing

to do with them is to distribute them in schools where some special work has to be done and to use them on full time in such buildings even though the score card should show that only part time men are needed.

(To be continued)

#### WHICH WOULD YOU HAVE CHOSEN?

(Continued from Page 44)

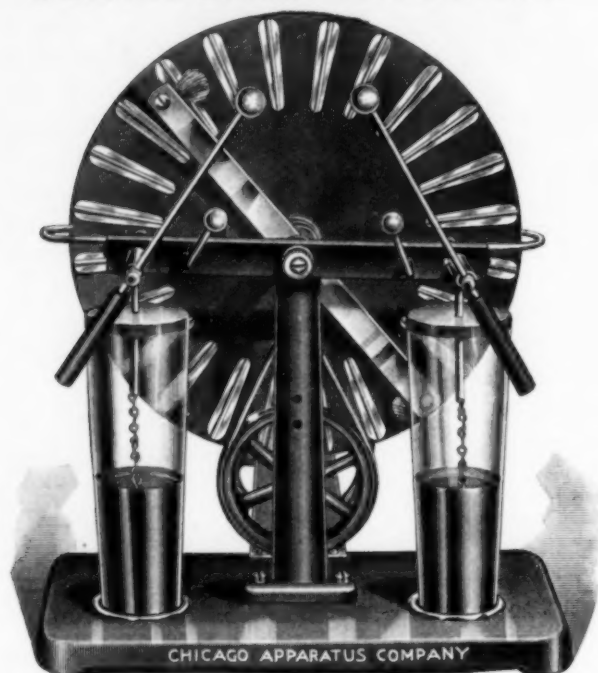
would have been commendable, had not their attention been rightfully due to a scholarly exposition of the uses of the English subjunctive which certain students in the front seats were taking down carefully from the lips of their instructor.

A gentle breeze came through the door, swaying the veil as a cobweb sways in the wind. Lucy Ann Smith's attention was caught by the discovery that in the class were two former pupils of her own, brothers, who had moved away from her home town at about the time of her own resignation from teaching. She watched them with interest, noting that they had hardly changed, except to grow taller, since they had been in her classes. The younger, a delicate, winning boy, was one of those talented people who learn without effort and at the same time let nothing that happens escape their observation. His brother, less talented, was somewhat morose and inclined to think that the world dealt unfairly with him. To get even with the world and its people he was scornful in manner and cynical in speech. He was one of the few pupils who had given Miss Smith to understand that he despised her and all she did.

The sound of the corridor gong aroused the concealed visitor from her meditations, and she was barely able to scuttle into the teachers' room and divest herself of her mantle before the room gongs sent the pupils hurrying to their next recitations. Then, in her own proper per-



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son, she visited one of those classes that are the best and among the most common things in the public schools, a class in which teacher and pupil are merely relative terms, for everybody teaches and everybody is taught; a class in which no one yawns, for no one is neglected; in which sarcasm and crayon-throwing are alike unthinkable; a period of study that is constructive rather than instructive.

Miss Lucy learned without surprise that the teacher of that class had had many opportunities to go elsewhere but was not a candidate for another position. She went slowly to her hotel and sat thoughtfully by the open window, wondering what she should do. Presently her attention was attracted by the sound of voices in the street below. Looking out she saw the two brothers who had once been her pupils leaning against the fence and talking together.

"It is strange," the younger boy was saying; "I wish I could account for it. Repeatedly this morning while Mr. James was giving us notes on the subjunctive I thought I saw Miss Lucy Ann Smith's feet, with no body or head attached, standing on the threshold of Room 26 A. You remember what trim little feet she had."

"I don't remember anything about Lucy Ann's feet," said the cynical, morose elder brother, he who had so obviously detested her, "but if Lucy Ann's head should come into that room things would get straightened out in short order and we dumb-bells would begin to learn something. Old Jamesie doesn't care for anything but you highbrows. Next time you are seeing things, see something worth while."

Miss Smith was dazed. The words, coming from a source so unexpected, seemed to her positively oracular. She felt exactly as if the boy had said, "Use your brains, Miss Smith, and spare your shoes."

She knew now exactly what she was going to do. She returned to her brother's home in the

ancient university town, told her story and gave back the magic veil, untorn and well tested. Her relatives shouted with laughter over her experiences, finding it exquisitely funny that she saw nothing amusing in the situation.

"Which of the eligibles are you going to hire, Aunt Lucy?" said the graduate student in chemistry. "Or are you going back yourself and show the world how it ought to be done?"

"None of them," she replied, "least of all myself. But I am going to use my judgment and what little wisdom I possess. I am going to find two perfectly inexperienced young college graduates who have taken one or two courses in education to give them a little background; I am going to tell them a few fundamentals myself, visit them often and see that they get started on the right track."

"Send down for the veil any time you need it, Auntie," said Lawrence.

### A PRINCIPAL'S OBSERVATIONS ON INTELLIGENCE TESTING

(Continued from Page 50)

the intelligence tests, the former being 0.88 and the latter 0.74.

Teachers' marks and intelligence test scores vary in much the same manner, except that the latter vary over a wider range. Both correlate almost perfectly for superior and dull pupils, and both vary greatly among average pupils.

Either teachers' marks, teachers' estimates, or school records when available, are more reliable than intelligence tests as a basis for the classification of pupils. A composite of all three makes intelligence testing a gross waste of time, energy, and money.

Many writers and speakers have offered solutions for some of the most critical modern problems—moral, religious, governmental, as well as educational—on the basis of the results in intelligence testing. Probably the most notable instance recently is that of Albert Edward Wiggam in his New Decalogue of Science. Mr.

Wiggam shows that he, as well as many of the rest of us, has been painfully misguided. It would have been impossible for him to have made such irrational statements as are contained in this book if he had not taken the results of intelligence tests seriously.

Mr. Wiggam claims to be a biologist and probably is. Furthermore, he probably has the scientific spirit and attitude of mind. It is nothing to his discredit, therefore, if he openly reveals the fact that he has been duped and hypnotized by the balderdash of the pseudo-educational psychologist. He, like the rest of us, accepted these pseudo-scientists as authorities, and is there any reason why he should not?

There is one essential difference, however, between Mr. Wiggam and the rest of us as practical educators. In his knowledge of intelligence tests and their value, he is about three years behind us. In his latest book "The Fruit of the Family Tree," page 288 and following, he admits "that the question whether these tests furnish us an accurate measure of the true, inborn intelligence of the American people as a whole is now being warmly debated, both by scientific men and the public press". This question is not now being warmly debated but it was about three years ago. To practical educators and scientific men, this question is no longer a subject for debate. They know that inborn intelligence is not measured. It is to be lamented that Mr. Wiggam's excellent contribution to educational thought should be so minimized by his dogmatic insistence that intelligence is being measured even to an appreciable degree.

There is much being spoken and written at present about the science of education. It is questionable if much of the literature of education is scientific. There is no doubt that most of it is pure and imaginative fiction. If most

(Concluded on Page 139)

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A wise purchase of School Equipment should not tax School Boards and taxpayers for renewal and repair expenses. When you equip your institutions with

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you have solved this problem for good. Absolutely non-absorbent, it offers no lodging to germs, stains or impurities of any kind. And the first is the last cost.

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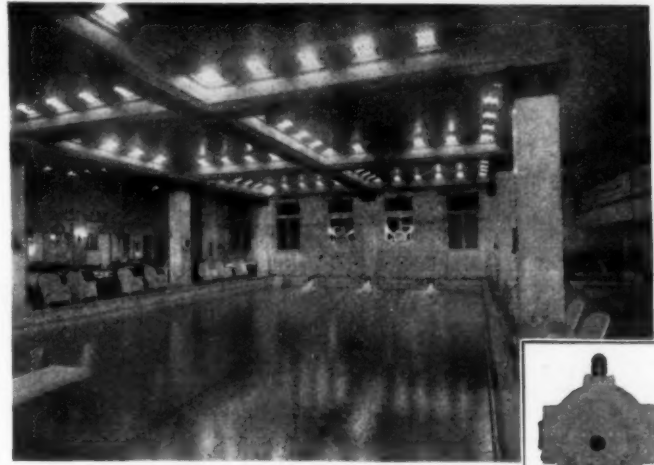
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MAKERS OF OUTDOOR WATER DEVICES SINCE 1853



The swimming pool of the Chicago Athletic Association. The health of the users of this pool is protected by R-U-V, ultra violet ray, sterilized water. If you are interested in learning how the excellent sterilization results were obtained in this pool we would suggest that you write for Booklet E-8.



## Really Guarding the Health of Pool Users

A swimming pool sterilization system to truly guard the health of the bathers would make sure that each drop of water is pure and unadulterated.

The R-U-V, ultra violet ray, Sterilizers fulfill this requirement exceptionally well. They accomplish sterilization by exposing the water to one of the most powerful germicidal forces known, ultra violet rays. The construction of the sterilizer is such that each drop of water must be thoroughly exposed to these purifying rays. As a result, the water delivered by the sterilizer is 100% free from disease-producing bacteria.

The R-U-V Sterilizer is positively automatic in its action. Proper sterilization is independent of human guess work and independent of the number of bacteria in the water. Ultra violet rays simply destroy all disease-producing bacteria in the water that is exposed to them.

The R-U-V Sterilizer does not add any chemical or other substance to the water to accomplish sterilization. Ultra violet rays are the only purifying agents used. Consequently, the water is absolutely wholesome.

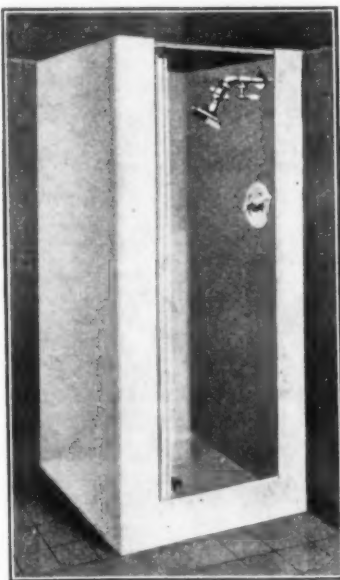
Low maintenance and operation costs plus the absence of high depreciation rates make the cost of R-U-V sterilizers exceptionally low per gallon.

An interesting booklet covering pool and drinking water sterilization recently published by our engineering department, may be had upon request. Simply write for Booklet E-8.

**THE R-U-V CO., INC.** **JAMES B. CLOW & SONS,**  
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Ultra Violet Ray Water Sterilization



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The Stall can be set in batteries of  
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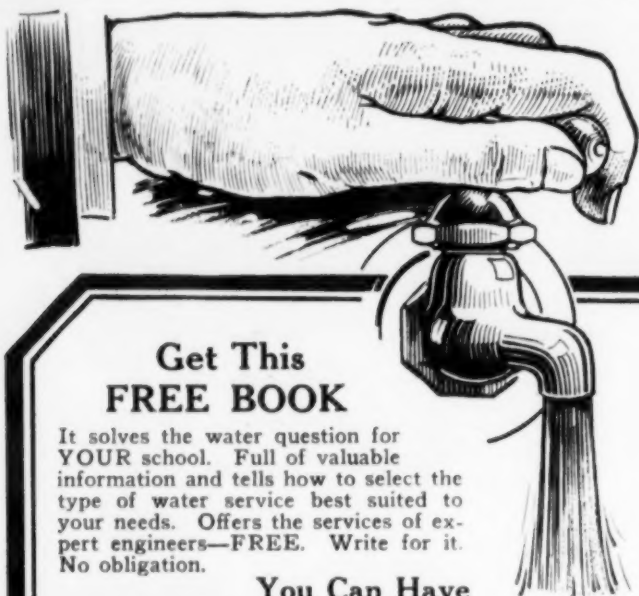
The walls of the stall are made of a continuous sheet of No. 10 gauge copper bearing steel which with the riser are welded to a dished bottom with waste outlet in center.

After installation is completed, the interior and exposed exterior of the stall should be finished with water proof enamel paint.

Write for Bulletin S B 15 X

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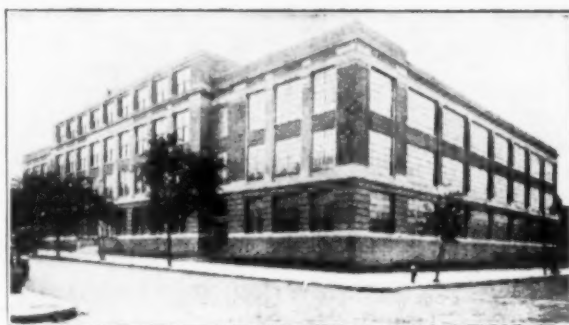
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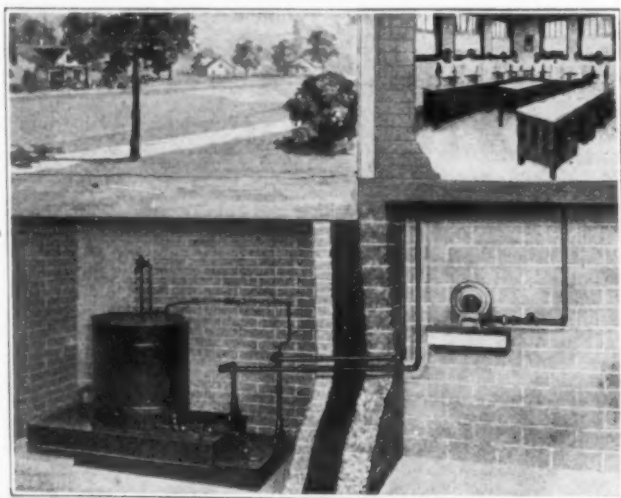
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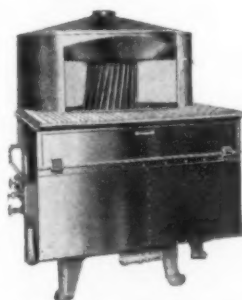
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Model "B" Autosan washes all tableware for establishments serving from 500 to 1,000 persons per meal.

Dishes washed the old fashioned way are dangerously unsanitary and will breed disease. You teach hygiene in your classrooms—why not practise it in your kitchen? The Autosan washes dishes thoroughly—first cleaning, then rinsing, and finally **sterilizing** all your tableware. The Autosan eliminates 60 per cent of the expense of chipped and broken china. The Autosan does 90 per cent of the work, requiring a minimum of human attention. It will cut your dishwashing payroll in half.

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THE BEAVER PRODUCTS CO., Inc.

BUFFALO, N. Y.



# BEAVER BLACKBOARD

TWO COLORS - BLACK AND GREEN



(Concluded from Page 136)

educators were scientists and were to study intelligence tests with a view to discovering their real worth and value, rather than with a desire to court favor with ambitious mountebanks, the literature of intelligence testing would read quite differently.

The time when education will become scientific and educators will become scientists seems afar off. Educational charlantry is too profitable and too fascinating for any such change to occur in the near future.

### THE FUNCTION OF OZONE IN VENTILATION

(Concluded from Page 53)

demands on the air necessitate a high state of chemical activity of its oxygen, and chemically active air may well be called fresh air, for when it is chemically active it is capable of maintaining itself fresh.

It is now generally recognized that chemical activity is, in a sense, an electrical phenomenon, and in the reaction of gases, chemical activity requires that the reacting gas be electrically excited, or ionized. The oxygen of nature is generally maintained in a fairly high state of electrical excitement, due to the ionizing influences of the short wave length emanations of sun light, radio-active changes in the earth's crust, lightning, etc. It is also generally understood that the life of an ion is very short, and that air must be continually under the influence of ionizing conditions, in order to retain its activity.

It is further known that the handling of air in a mechanical ventilating system, its passage through stack heaters, along grounded metal ducts, etc., is a very effective way of deionizing it. It is thus seen that the air handled by a mechanical ventilating system has lost much of its chemical activity, and, perhaps, in this direction may lay the explanation of the many conclusions which would tend to prove that

window ventilation is superior, from a standpoint of health, to mechanical ventilation. For, when the other factors are considered, there is nothing to recommend window ventilation, yet it must be admitted that mechanically handled air is not as fresh as the air of nature; nor as capable of destroying the products which it is called upon to assimilate. This condition can be rectified very readily, however, by the use of ozonizers, as the ozonizer will supply to the air of the ventilating system, both ozone and chemically active oxygen, in quantities that will maintain a fresh condition at all times. One of the outstanding features of a ventilating system equipped with ozonizers is the freshness and zest of the air condition.

### Recirculation and Ozone

From the experience of every member of the ventilating fraternity, we know that there is nothing to be feared from the  $\text{CO}_2$  content of air, even on installations which attempt to recirculate one hundred per cent of the air. Now the requirement of 30 cubic feet of fresh air per minute per person is based on a  $\text{CO}_2$  index of six parts per hundred thousand, as being adequate ventilation to prevent intoxication from expired air; it is a factor of a discredited theory. From the evidence here presented, we know that this figure is greatly in excess of the actual requirements, and that its use renders the size of an adequate ventilating system too great to be economically operated. What is badly needed in the art is to set this requirement aside, and permanently strike it from our code; for it has proven itself unnecessary, and, further, inadequate. I say inadequate for this reason: With the present congestion of our commercial and industrial conditions, our swarms of automobiles, etc., the outside air of our cities is about as unfit for ventilation as any air we can find. The Chicago Board of Health has recently called attention to the need

of cleaning and purifying the air of our cities before using it for ventilation, and today ozonizers are essential in any ventilating system to maintain the air pure and odorless. Then, in view of this, the use of large quantities of outside air in ventilating our buildings avail us nothing.

What is actually wanted is a curtailment of the air we take from the outside, even to the extent of attempting one hundred per cent recirculation (I say attempting, since one hundred per cent recirculation can never be accomplished, due to leakage, infiltration, etc.), and the proper chemical and physical conditioning of the air within our buildings.

It has been amply demonstrated that ozone will effectively destroy body effluvia, and thus purify and deodorize recirculated air. Ozone will maintain the air chemically active and capable of meeting all of the demands made of it, and it will impart to the air a zest and freshness which cannot otherwise be obtained in mechanical ventilation.

I am convinced that the present methods of ventilation which we practice, and which I term semi-mechanical, are fast to be replaced by a complete mechanical method, which will control every factor bearing on health and comfort. This system will be sufficient unto itself, and its connection with the outside atmosphere will be merely accidental. Such a system will be compact, economical of operation, many steps nearer perfection, and ozone will make it possible.

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- <sup>3</sup>Hammond, W. A., A Treatise on Hygiene, with Special Reference to Military Service, 8 vo., Philadelphia, 1863.
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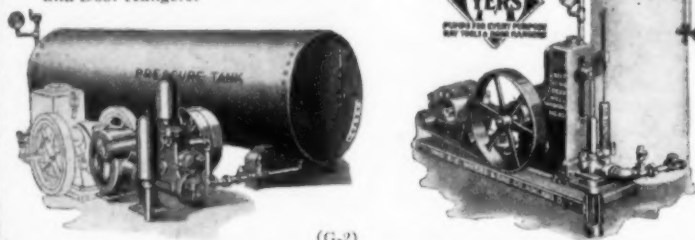
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<sup>2</sup>Haldane and Smith, Journal of Pathology and Bacteriology, Vol. 1, pp. 168-318 (1893).

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<sup>18</sup>New York State Ventilating Commission.

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<sup>22</sup>Olsen, J. C., and Ulrich, W. H., Jour. of Ind. and Eng. Chem., VI, pp. 619-623; Heating and Ventilating Magazine, 1914, pp. 15-19.

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### BOISE SCHOOL BOARD RULES

(Concluded from Page 132)

#### ARTICLE XIX—School Athletic Field

Section 1. Custody of the School Athletic Field is placed in the Superintendent of Schools,

subject to the supervision of the Board of Education and the policies and regulations adopted by the Board.

Sec. 2. The School Athletic Field may be used for the following purposes:

- (a) Athletic and other activities of the public schools;
- (b) Community events;
- (c) Other proper uses.

Sec. 3. The primary use of such athletic field shall be for the schools of the district.

Sec. 4. Community events for which such field may be used are public meetings, field days, pageants, band concerts, and other like events, called by or under the supervision of public authorities. Such use will be without charge, or for such nominal charge as will defray the actual expense thereof.

Sec. 5. Other proper uses for such field are athletic games, field events, concerts, and the like, not herein defined as community events, for which it may be let at a rental of 15% of the gate receipts thereof, the charge to include practices or rehearsals at such reasonable times as shall be designated by the Superintendent.

Sec. 6. Charges may be reduced or waived when, prior to use, application be made for such field with such showing as will meet the approval of the Board of Education.

Sec. 7. The Superintendent of Schools shall schedule all appointments for such field and keep a calendar thereof.

#### ARTICLE XX—Amendments

At any regular meeting of the Board, any rule or regulation of the Board may be enacted, amended or repealed by a majority vote of the full Board membership, provided that notice of the proposed action shall have been given at the regular meeting last preceding. Any rule or regulation may be suspended, repealed, amended or adopted at any meeting by the unanimous vote of the full Board, without previous notice having been given.

The rules of the Boise City Board of Education have been developed and adopted through the leadership of Superintendent Charles F. Dienst.

#### THE CARNEGIE FOUNDATION

Dr. Henry S. Pritchett, head of the Carnegie Foundation, has issued his annual report for the year ending June 30, 1924. The total resources at its command are \$28,148,000, of which \$15,-

192,000 are held as general permanent endowment, \$1,322,000 as endowment of the Division of Educational Enquiry, \$10,391,000 as a reserve for the liquidation of pension obligations accruing after 1928, \$768,000 to assist colleges and universities to adopt the new contributory plan of contractual retiring annuities, and \$475,000 as an emergency reserve. All of the investments are in bonds.

The total payments for allowances and pensions for the period named were \$1,164,829.84. During this period the foundation began the payment of 77 new allowances, of an annual value of \$141,000, 51 to former teachers and 26 to widows. The average age at which teachers on allowances from the foundation retired fell from 66.83 in the previous year to 66.51, while the average period of service rose from 31.78 years to 32.59 years. The average allowance in force increased from \$1,612 to \$1,634.

Up to June 30, 1924, former teachers at Harvard had received \$963,000, at Yale \$843,000, at Columbia \$744,000, and at Cornell \$579,000. Of the total expenditure of the foundation in allowances, professors retired in associated institutions have received over \$10,000,000, and in non-associated institutions \$2,000,000.

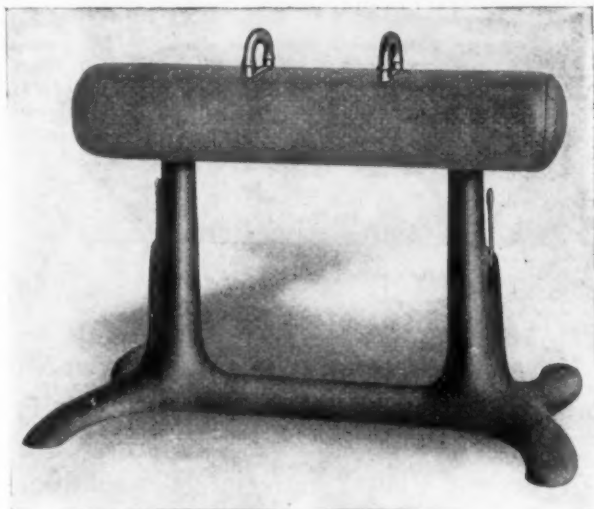
More recipients of allowances live in New York than in any other state, a total of 121. Massachusetts is second with 91, and Connecticut third with 65; Pennsylvania has 44, Ohio 34, California 31, and Canada 43.

School tax data for Michigan has been compiled by Superintendent M. W. Longman, of Muskegon. He shows the tax rate of the 95 cities out of 110 having over 2,000 population. The school tax is as low as \$4.25 at Springwells and as high as \$39.20 at Gladstone. The median of the total tax exacted is \$37.85, the school tax \$14.33, and the ratio of the total devoted to education, 39 per cent.

That the schools of New York City are too large, is the contention of Miss Elizabeth Farrell, inspector of ungraded classes, after spending a year in Europe in a study of the schools there. She contrasted New York with its 1,000,000 school children housed in 600 schools with London with its 700,000 children in 1,000 elementary schools. There individual attention was possible; here it was well-nigh impossible. London has 60 secondary schools; New York, 35 or 40.

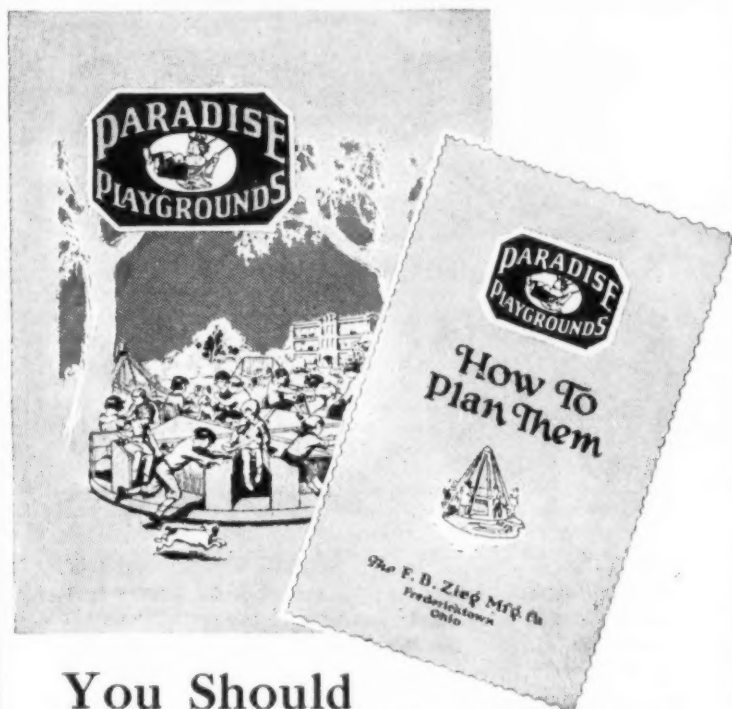
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### *Athey Perennial* Window Shades

Made of a special Coult Weave Herringbone Cloth, which is almost indestructible. And there is nothing about the shades to get out of order. No springs, catches, latches or rollers to slip, stick or break. *The first Athey Shades made—10 years ago—are still in good condition.*

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Because they can be raised from the bottom, or lowered from the top, they can be adjusted to eliminate the sun's glare. Hence they *eliminate the expense and fire hazard of awnings.*

By raising the shades to the top, and lowering to about 10 inches from the window stool, the sun on the glass superheats the air between the glass and the shade. This superheated air must pass up and out above the sash. This draws the air from the room and *automatically provides perfect ventilation.*

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with side-fine adjustment,  
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For High School Use.**

Among its many advantageous  
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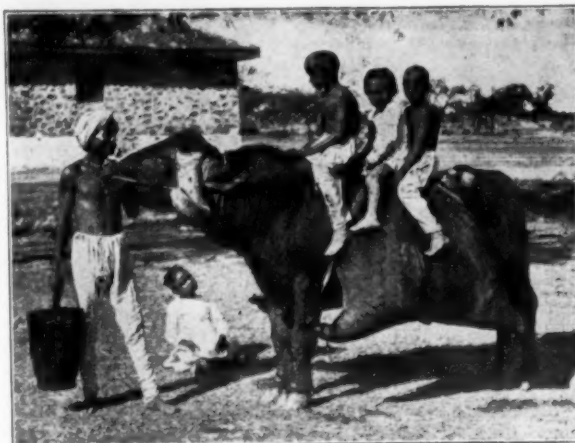
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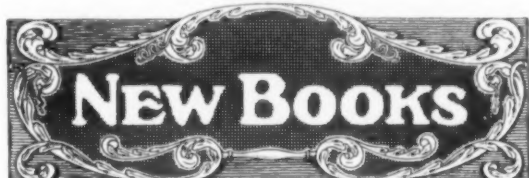
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## Progressive Composition

By Frances M. Perry. Cloth, 357 pages. Price, \$1.44. World Book Co., Yonkers-on-Hudson, N. Y.

This course has two interesting underlying ideas which run through the entire work of the two years. The first year's work is intended to safely ground the student in the ability to observe clearly, and to report accurately, the facts which he has observed. He does this through simple letter writing, and various types of narrative and descriptive writing. In the second year the work seeks to train in reflection, judgment and imagination—in the discussion of facts and ideas. The student is required to write various themes which older English teachers would designate as exposition and argumentation. A complete review of grammar, progressive lessons in word study, sentence construction, paragraph arrangement, use of the dictionary, punctuation, and considerable drill material are carried forward together in a natural and logical arrangement.

There is throughout the work a freshness and incisiveness that will make the work attractive to students and readily teachable.

## The Science of Everyday Life

By Edgar F. Van Buskirk and Edith Lillian Smith. Cloth, 498 pages, illustrated. Price, \$1.60. Houghton Mifflin Co., Boston.

This book is a revision of a work first issued in 1919, and since then widely used in beginners' courses in general science. The work has been completely revised and corrected, and considerable new material on recent developments—such as radio, commercial use of the airplane, ventilation, etc.—has been introduced to illustrate the discussion of fundamental principles, phenomena, and theory. The book which is organized on the project basis, provides con-

siderable material for class and home projects.

## Unit Studies in Geography

Rose B. Clark. Cloth, 8 mo., 256 pages. Price, \$2. The World Book Co., Yonkers-on-Hudson, N. Y.

This book divides the entire study of geography for the nine grades into forty units, intended to develop, in some cases, a definite geographic principle or feature, and in others, the facts of a continent or a well defined section. Each unit is so arranged that definite facts and principles will be impressed upon children to immediately interest them and to be of value in later life. Each unit opens with material that will help the teacher find a natural starting point of knowledge which the children already possess, for developing the subject. Map study is carried on in a way that will cause children, themselves, to find the salient facts of location, surface features, and to draw comparisons and conclusions. Definite interest centers upon which problems and projects can be built are suggested. Each unit includes ample references, some of which are open to question on the score of their propriety. The entire work is interesting, comprehensive, and purposeful.

## Shorthand Catechism

New Era Edition. Paper, 95 pages. Price, \$0.60. Isaac Pitman & Sons, New York City.

This book serves several important purposes: It affords the student a ready review of the principles which he has studied; it provides a useful guide to the teacher in oral tests. The entire range of Pitman phonography is thoroughly covered.

## Occupational Therapy

By Louis J. Haas. Cloth, octavo, 409 pages. Price, \$6, net. The Bruce Publishing Co., Milwaukee, Wis.

Work is the cure of all ills, according to an old proverb, and modern science has shown how true this is in many forms of nerve and mental troubles. The present book discusses the aims and methods of therapeutic occupations, and describes in detail, nearly twenty distinct crafts which he employs with patients.

## How to Study Modern Languages in College

By Peter Hagboldt, Ph. D. Paper, 24 pages. Price, 27 cents. The University of Chicago Press, Chicago, Ill.

Students in high school, as well as college, may well read this purposeful guide to the study of modern languages. Prof. Hagboldt has compressed an immense amount of practical information and many helpful hints into very small compass, and has offered splendid advice and encouragement to beginners.

## Motivated Primary Activities

By Margaret F. Metcalf. Cloth, 144 pages. Price, \$1.20. Beckley-Cardy Co., Chicago, Ill.

This book suggests activities in reading, health work, language study, silent reading, picture study and number work. Many of the activities require books and materials outside the present volume. The inclusion of directions and extracts from the games, studies, plays, etc. suggested would save much time and greatly aid the rural teacher, as well as greatly increase the usefulness of a book of this kind.

## Shorthand Reader

New Era Edition. Paper, 48 pages. Price, \$0.25. Isaac Pitman & Sons, New York City.

Classic literature provides the material for this intermediate reader. A key is appended.

## Miscellaneous Dictation Tests for Shorthand Students

New Era Edition. Paper, 142 pages. Price, \$0.60. Isaac Pitman & Sons, New York City.

These tests consist of 52 extracts from recent British newspaper articles and public addresses. The aim is to provide material of interest and to afford an opportunity for using a vocabulary which is broader than that possible in ordinary business correspondence. A complete key in ordinary type is included.

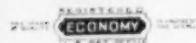
## One Hundred Ways of Teaching Silent Reading

By Nina Banton Smith. Cloth, 149 pages. Price, \$1.40. World Book Co., Yonkers-on-Hudson, N. Y.

This book is a contribution to the rapidly growing literature of method in silent reading. The "one hundred ways" of teaching the subject are devices originated or tried out by the author in classes under her supervision in Detroit, and found useful for increasing speed, comprehension, organization, or selection in reading.

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## National Dances of Ireland

Edited and described by Elizabeth Burchenal. Cloth, 136 pages, illustrated. Price, \$3. A. S. Barnes & Co., New York City.

This book contains 25 traditional Irish dances collected from original sources in Ireland, together with directions for performance and numerous illustrations and diagrams. The dances are of a varied character, ranging from the oldest type to the most modern, and are intended to be of particular help in the carrying out of simple folk dances as a form of recreation. The book offers a wide selection in the form of round dances, square dances, and long dances, together with tunes for each.

## The High School Principal

By Leonard V. Koos. Cloth, 121 pages. Price, \$1.20. Houghton Mifflin Co., Boston.

This book is a statistical study of the professional, economic, and educational status of the high school principal in four groups of cities, ranging in population from one thousand to one hundred thousand. It presents a very interesting picture in word and graph, of the average condition and suggests ways and means for further stabilizing and professionalizing the office.

Dr. Koos finds that the position is looked upon as one for men except in the smallest schools and that, while salaries are still inadequate in view of the training and apprenticeship required, advancement to a comfortable livelihood is assured to induce capable men to enter the work.

The majority of principals are college men with four or five years' work to their credit, who have done considerable summer and extension work in academic and professional subjects. A negligible number began preparation as under graduates. The majority prepared while holding teaching positions or principalships. Teaching in the high school is the form of apprenticeship common to most men in the field.

The superintendency is the common aspiration of principals who desire to rise, except in the smallest schools where many hope to get into larger schools. In larger schools, the principal devotes his entire time to administration and supervision, but in small schools too much time must be given to teaching and supervision of assembly rooms to allow for proper attention to the duties of the principalship proper. A weakness of the principalship is the lack of initiative

in administrative and supervisory policies. Apparently superintendents and school boards do not recognize the professional status of the principal and look almost entirely to the superintendent for initiative. Just here must come the greatest development in responsibility and privilege if the principalship is to grow to have a genuine professional status.

The book, as a whole, suffers, we think, from the emphasis which the author places upon the university training of the principal. Perhaps it would be more correct to say that the book does not develop amply those phases of the subject which relate to professional growth through greater recognition on the part of the school board and the superintendent, through professional organization, through legal recognition of the office, through activities which will advance the social, economic, and general status, and the influence of the principal in the community.

## Learning to Typewrite

By William Frederick Book. Cloth, 463 pages. Price, \$2.80. Gregg Publishing Co., New York City.

This book takes up the problem of teaching a school subject, not from the general viewpoint of method and management, but entirely from the basic psychological problems involved. It seeks to answer the questions: How is skill in typewriting acquired? What are the laws of learning as applied to acquiring skill? How may the teacher best direct the pupil so that his progress will be economical and sure?

The book takes up first, the general problems of the psychology of skill; secondly, it presents an exhaustive analysis of the process of learning typewriting, the development of habits, the tendency to error, the difficulties of learning, and factors which impede and stimulate progress; thirdly, it suggests the role which the teacher must play in directing, stimulating, and correcting the learner. While there are numerous debatable matters in the introductory chapters on the psychology of skill, the body of the work in which the problem is specifically analyzed and the function of the teacher is set forth, constitute a most important contribution to the science of teaching.

## Pine Tree Playmates

By Mary Frances Blaisdell. Cloth, 216 pages, illustrated. Benj. H. Sanborn & Co., Chicago.

Children who are just beginning to read will enjoy the frolics and adventures of these interesting wood folks—Mother Bear, Bunny Rabbit, Jack Squirrel, Polly Robin, Blackie Crow, and half a dozen others. Excellent illustrations brighten the pages.

**Simon Kenton The Scout.** By J. I. Corby. Cloth, 318 pages, illustrated in color. Price, \$1.75, net. Thomas Y. Crowell Co., New York City. A story for boys.

**Practice Tests in the Fundamental Operations.** By Vesta Reaver. Paper, 48 pages. Price, \$0.35. The Plymouth Press, Chicago. Tests in arithmetic.

## Drawing for Zinc Etching

Ray Matasek. Cloth, octavo. Price, \$1.35. Bruce Publishing Co., Milwaukee.

This book outlines the qualities desirable in pen and ink, crayon, and other drawings intended for reproduction by the zinc etching process. The various techniques and their limitations are described, and such special processes as Ben Day work, silver print drawings are explained. The book will be of use in any high school art library, and will be especially useful for the class which is getting out an annual or a monthly illustrated school paper.

**The Jones Complete Course in Spelling.** For grades two to eight. By W. Franklin Jones. Cloth, 227 pages. Published by Hall & McCreary, Chicago, Ill. This book has been prepared upon the basis that if a child is trained to spell words as he needs to use them, and to write in correct form the words he uses, the habit will develop eventually into a "spelling conscience."

**Exercises on the Apparatus.** Tumbling and stunts for men and boys. By W. J. Wittich and H. C. Reuter. Cloth, 110 pages. Price, \$2. A. S. Barnes Co., New York City. This book is intended for men aspiring to teaching positions in physical education, but who have had little training in this field and are confronted with the task of teaching these exercises and stunts. The book offers an abundance of technical material as a help toward familiarity with various methods of procedure in teaching.

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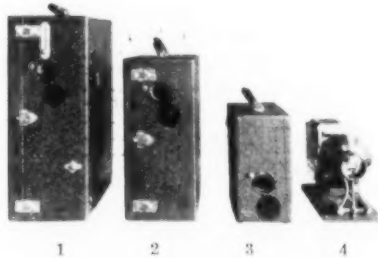
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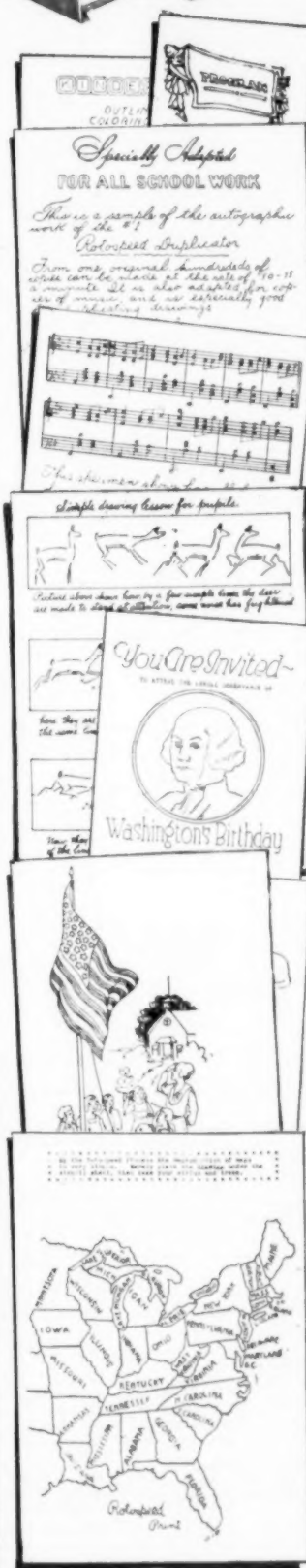
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## CAN NEW YORK CITY AFFORD TO PAY?

The 29,000 teachers of New York City in petitioning recently the legislature for an increase in salaries presented some pertinent facts on the purchasing power of the dollar and the ability of the great metropolis to pay for education.

It is demonstrated that in 1924, the dollar buys only as much as 58 cents would buy in 1914. The Ricca bill in the legislature, which calls for the expenditure of \$11,500,000, is not, it is contended, a salary increase but an attempt to restore to the teacher the purchasing power of 1914. The following table makes this clear:

| Teaching Grade                   |  |
|----------------------------------|--|
| Kindergarten .....               |  |
| High School Assistant.....       |  |
| High School First Assistant..... |  |
| High School Principal.....       |  |
| Elementary School Principal..... |  |

The per capita cost of education in the several cities of New York state shows that New York city ranks ninth, as shown by the following list:

Per Capita Cost of Education in the Cities of New York State: 1923

|                       |          |
|-----------------------|----------|
| 1. White Plains ..... | \$143.51 |
| 2. New Rochelle ..... | 125.39   |
| 3. Buffalo .....      | 125.32   |
| 4. Yonkers .....      | 120.44   |
| 5. Mt. Vernon .....   | 118.57   |
| 6. Long Beach .....   | 112.25   |
| 7. Troy .....         | 106.45   |
| 8. Albany .....       | 105.62   |
| 9. New York .....     | 104.60   |

Another interesting study, showing what the several cities spend for education compared with the total expended for local government, is also presented:

| Percentage of City Revenue Spent for Education: |       |
|---|-------|
| New York spends but.....                        | 36.8% |
| Los Angeles spends but.....                     | 39.4% |
| Detroit spends but.....                         | 41.5% |
| Toledo spends but.....                          | 44.5% |
| Columbus spends but.....                        | 49.8% |
| Omaha spends but.....                           | 51.5% |
| Oakland spends but.....                         | 51.9% |
| Duluth spends but.....                          | 53.9% |
| Akron spends but.....                           | 55.5% |
| Youngstown spends but.....                      | 57.3% |

The taxes for education in New York State amounted to 17.5 per cent in 1910 and 9.3 in 1920 as compared with taxes for other purposes.

The following facts and figures demonstrate the earning power and the financial ability of New York City:

The value of the products manufactured in New York City in 1919 was \$5,260,707,577.

The total net income of Federal income taxpayers in New York State increased from \$1,922,864,651 in 1916 to \$4,110,588,989 in 1922—over 100 per cent. The major portion of this income comes from New York City.

| Maximum Salary 1914 | Equivalent Salary 1925 | Ricca Schedules | Deficit Ricca Schedules |
|---------------------|------------------------|-----------------|-------------------------|
| \$2,160             | \$3,800                | \$3,340         | \$ 460                  |
| 2,650               | 4,600                  | 4,300           | 300                     |
| 3,150               | 5,550                  | 5,250           | 300                     |
| 5,000               | 8,820                  | 7,750           | 1,070                   |
| 3,500               | 6,175                  | 6,000           | 175                     |

The income of New York City per pupil in average daily attendance was \$2,827 for the year 1921.

Bank Clearings in New York City have increased from \$89,760,344,971.31 in the year 1914 to \$235,498,649,044.75 in 1924—over 100 per cent.

Stock sales on the New York Stock Exchange increased from \$47,889,628 in 1914 to \$237,276,927 in 1923—over 300 per cent.

Editor's Note:  
Since this article was set in type the bill has been vetoed by Governor Smith.

## A DRAMATIC SCHOOL BOARD SESSION

When Superintendent Longanecker's recommendations, on the reappointment of teachers and principals, were submitted to the board of education of Racine, Wisconsin, it was found that the committee on instruction had omitted the name of Principal William C. Giese, of the high school. The plan to drop Giese had spread about town, thus on the night of the board meeting a large delegation of citizens appeared to make a strong protest.

When the chairman announced that the board would go into executive session, which meant that the crowd must retire, the row began.

"If you are going into executive session we are going with you," said the spokesman. "We will stay all night if necessary. You cannot tire us out!"

Superintendent Longanecker then asked the privilege to read a report dealing with the Giese reappointment. This was denied. "Very well then, the people shall hear the report," said the superintendent as he handed copies to the reporters.

The complaint made against Giese was that he had failed to cooperate with the school board. Superintendent Longanecker denied this and in his report said: "Mr. Giese is a man of unquestioned character and integrity. His scholarship is of a very high order. He has his bachelor's degree from the University of Chicago and master's degree from Columbia University, and has remained a constant student ever since receiving his degrees.

"His methods of handling the high school are not merely excellent, but very superior. In view of the extraordinary difficulties of handling the school during the past six years, he has done a very remarkable piece of work."

When the board finally agreed to defer final action in the matter the crowd dispersed.

—A bill in the Illinois legislature provides for county boards of education. In opposing the measure, the Fairfield, Ill., Record says: "This board would have the right to do away with certain schools, if they thought best, would levy all of the taxes for the whole county and would employ all teachers, build all schoolhouses, as well as keep them in repair. If desired the proposed school board could do away with certain schools, if they thought best and could arrange with some person or persons to haul the children of the district where the school was abolished, to some other school. In other words, the real purpose of the proposed bill is to take from the people of the various communities of the county the right to employ their own teacher and operate the schools in the way they feel will be for the best interests of the district and the pupils of the district, and to create some further jobs for some of the politically faithful ones."



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**SCHOOL LIGHTING**  
(Continued from Page 48)

identified with the school lighting problem in one or another of its various aspects. The American Engineering Standards Committee has approved this Code as the American Standard. It serves as a guide for the enactment of legislation on school lighting, provides architects with detailed information on which to base school lighting specifications, and points the way for school authorities to improve lighting conditions. Copies of this Code of Lighting School Buildings can be obtained from the Illuminating Engineering Society, 29 West 39th Street, New York City.

On the accompanying cuts are shown examples of well-lighted schoolrooms, accompanied by notes on the spacing distances between lighting units and the lamp sizes which represent good practice in school lighting. Simplified specifications on the proper lighting for classrooms are given below:

**A. Interior Finish of Rooms**

Ceilings, walls, desks, and other woodwork should have a dull (not glossy) finish.

The color of ceilings and friezes should be of a light tone which, when new, reflects at least 65 per cent of the light. Preferred colors are white and light cream.

The color of walls should be of a medium tone which, when new, reflects from 30 per cent to 50 per cent of the light. Preferred colors are light warm gray, light olive green, light buff, and dark cream.

**B. Type of Lighting Unit**

Generally satisfactory and economical lighting for classrooms is obtained with lighting units of the direct type, consisting of completely enclosing globes of diffusing glassware.

Lighting units of the indirect or semi-indirect types provide a superior quality of illumination, and are always to be specified for use in drafting rooms and in "sight-saving" classrooms for children whose eyes are badly defective. With such lighting units, the ceilings and upper side walls should be kept especially light in tone.

All lighting units require frequent cleaning.

**C. Total Light Output<sup>1</sup>**

The total light output of a lighting unit should be at least 78 per cent of the light output of the bare lamp.

**D. Maximum Brightness<sup>2</sup>**

The maximum brightness of a lighting unit in candlepower per square inch at 35 degrees above nadir and at 70 degrees above nadir should not exceed the brightness limits in Table 1.

**E. Globe Diameter**

The minimum and recommended diameters

<sup>1</sup>Tested with a standard clear bulb lamp of the correct size located within the lighting unit as specified by the manufacturer, and in the case of enclosing glassware with a white blotter over the opening.



TESTING A LIGHTING UNIT AT THE WORKING (DESK TOP) SURFACE, WITH A FOOT CANDLE METER WHICH ACCURATELY RECORDS THE LIGHT INTENSITY.

for enclosing globes of diffusing glassware are given in Table 1.

| Size of Lamp | Globe Diameter |             | Maximum C. P. per Sq. In. |     |
|--------------|----------------|-------------|---------------------------|-----|
|              | Minimum        | Recommended | 35°                       | 70° |
| 100 watts    | 12"            | 14"         | 3.0                       | 2.5 |
| 150 watts    | 14"            | 16"         | 3.5                       | 3.0 |
| 200 watts    | 16"            | 18"         | 4.0                       | 3.5 |
| 300 watts    | 18"            | 18"         | 4.0                       | 4.0 |

Lighting units of the indirect or semi-indirect types may be smaller in diameter than the minimum figures given in Table 1, providing the maximum brightness limits are not exceeded.

**F. Mounting Height of Lighting Units**

Lighting units of the direct type should usually be mounted about ten feet above the floor.

Lighting units of the indirect or semi-direct types should usually be mounted two to three feet below the ceiling.

**G. Number of Lighting Units**

In a standard classroom, 24 feet by 32 feet, six lighting units of the direct type should be used. This corresponds to one lighting unit of the direct type for about every 130 square feet of floor area, which is a good general figure to follow in classrooms which are not of standard size, and the floor area per lighting unit should not exceed 145 square feet.

With lighting units of the indirect or semi-direct types, fairly good illumination is obtained with only four units in a standard classroom, 24 feet by 32 feet. However, better results are obtained with six units. In general, with lighting units of the indirect or semi-direct types in classrooms which are not of standard size, it is preferable to have one lighting unit for about every 160 square feet of floor area, and the floor area per lighting unit should not exceed 190 square feet.

(Concluded on Page 151)

<sup>2</sup>Tests of individual samples cannot be considered as representative of a manufacturer's product. Where a large number of units is to be ordered, the quality of the glassware should be investigated with great care. Frequently, in order to make sure that glassware under consideration meets specifications C and D, a representative of the board of education should select at random about two per cent of the glassware designated for the school installation, and the bidder should submit with his bid photometric tests made on these samples in some qualified laboratory, such as the Electrical Testing Laboratories, New York City.

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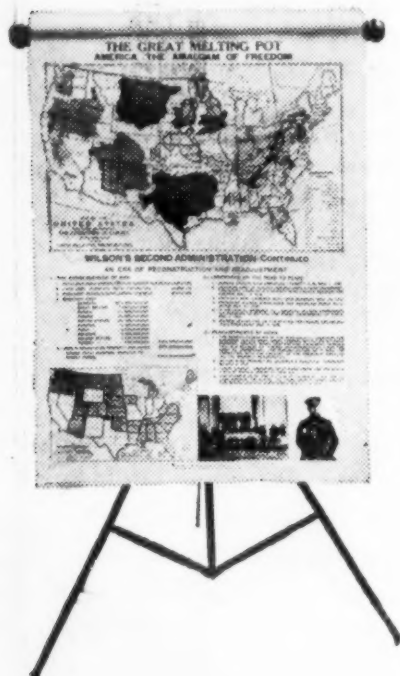
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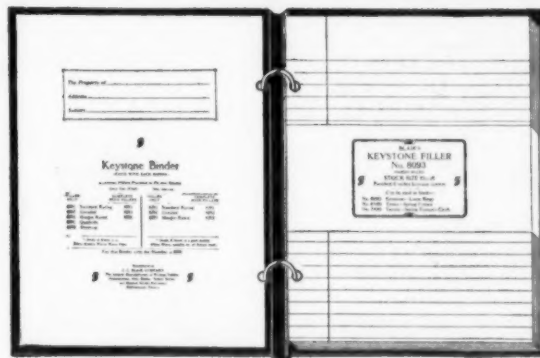
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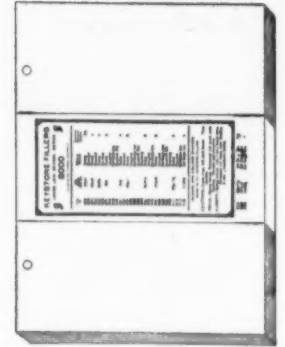
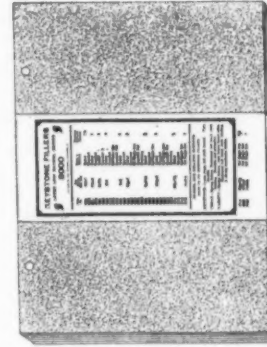
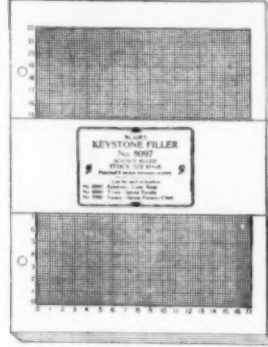
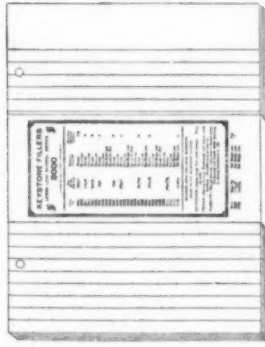
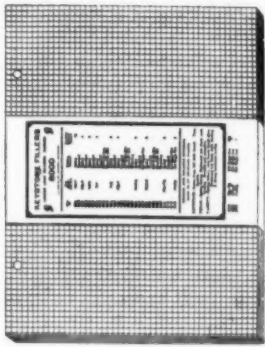
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(Concluded from Page 148)

### H. Size of Lamp

#### 1. With lighting units of the direct type:

Where the floor area per lighting unit is not over 110 square feet, the minimum lamp size is 150 watts, and the recommended size is 200 watts.

Where the floor area per lighting unit is between 110 and 145 square feet, the minimum lamp size is 200 watts and the recommended size is 300 watts.

#### 2. With lighting units of the indirect or semi-direct types:

Where the floor area per lighting unit is not over 140 square feet, the minimum lamp size is 200 watts, and the recommended size is 300 watts.

Where the floor area per lighting unit is between 140 and 190 square feet, the minimum lamp size is 300 watts, and the recommended size is 500 watts.

### I. Type of Lamp

Use clear Mazda "C" lamps in all classrooms.

In art rooms, greenhouses, sewing rooms, or other special applications where the artificial light should approximate the color quality of daylight, use Mazda Daylight lamps, or clear Mazda "C" lamps in color-correcting glassware.

### J. Safety Holders

Lighting units of the direct type should be suspended by a "safety holder" of good quality, in differentiation from the older types of holders in which the glassware was supported by lugs or screws pressing directly against the neck.

## LAW AND LEGISLATION

—The Wisconsin state department of education issued the following ruling: "It is a good plan to close a school and provide transportation if at all feasible for a year or so in cases where continual bickerings and fault finding exists among the patrons concerning the management of the school. Such action on the part of the electors might be of some benefit to the children. When the school becomes a factional storm center its usefulness is at an end. Transportation or the dissolution of the district might give the children an opportunity to become good citizens."

—The Michigan legislature is considering a bill which provides for a five-man board of edu-

cation for every county with power to appoint the superintendent of schools.

—A bill in the Pennsylvania legislature provides that no banker who deals with the school system shall be eligible for school board membership. In Sharon this would affect Charles H. Pearson, cashier of the M. and M. Bank, and president of the Sharon school board; Walter S. Palmer, treasurer of the school board and a member of the board of directors of the McDowell National Bank; Harry J. Filer, a school director and member of the directorate of the McDowell Bank and Wallace C. Leffingwell, who is a director of the First National Bank and solicitor for the Sharon school district. Each bank has on deposit funds belonging to the school district.

—The Massachusetts Superintendents' Association has introduced a number of bills in the legislature, calling for various amendments to the school laws. Among them are bills defining the words "illiterate" and "employment." Bills



AWARD OF CIVIC CO-OPERATION MEDAL.

Dr. Samuel McCune Lindsay of Columbia College presents the Bosom gold medallion to Walter S. Pettit at the Julia Richman High School, New York City. President George J. Ryan, of the New York board of education, is seen standing between Dr. Lindsay and student Pettit.

from other sources relate to teachers' tenure, compulsory school attendance, etc. One measure provides that all teachers appointed by boards of education shall first be nominated by the superintendent.

—The following rulings were recently made by the state department of education of Wisconsin:

A school board or board of education has full authority to adopt rules directing the health and safety of the pupil while in school or on the school grounds. It is within their power to require certificates of vaccination as a requirement for attendance on the part of children. Vaccination cannot, however, be compelled by school officers.

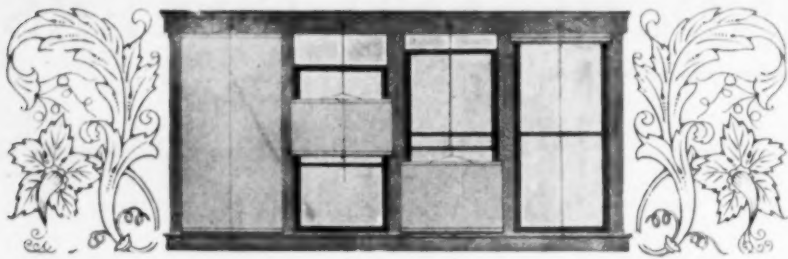
A school district board has full authority to suspend from the privileges of the home school a lad paroled from the Industrial School for Boys who does not obey the school authorities and who is a menace to the welfare and peace of the school children while at play. This lad is under the direction of the state board of control but this fact does not affect the authority of the officers of the home school. If the boy is denied school privileges the district board should notify the state board of control at once.

—A petition has been filed in the supreme court of Middlesex County, Mass., by William C. Drouet, to compel the Arlington Heights board of education, to appoint a sufficient number of physicians to examining all children, at least once a year, as required by law.

—A so-called school relief bill in the Arkansas legislature calls for the assessment of property at its full selling value. Under the measure, patrons of any school district would be enabled to vote any tax up to the 12-mill limit and thereby make it possible, if they desired, to double the revenue now being produced. It is believed that the bill will solve the problems of school finance which have been increasingly embarrassing for several years.

—The nuisance of ticket selling by pupils reached a climax in the Cleveland, O., schools when a little girl stole \$80.81 from her father's till in order to outdo her fellow pupils. The board of education will take the matter under advisement. "If the Cleveland people do not want school entertainments," said Superintendent R. G. Jones, "we will put a stop to them."





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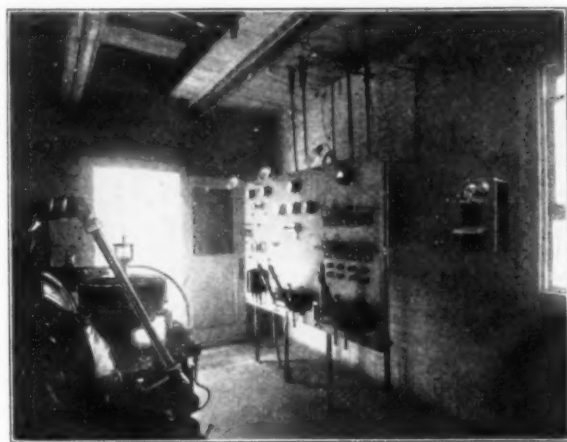
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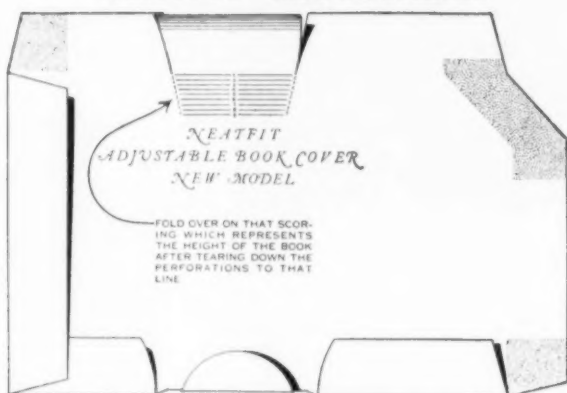
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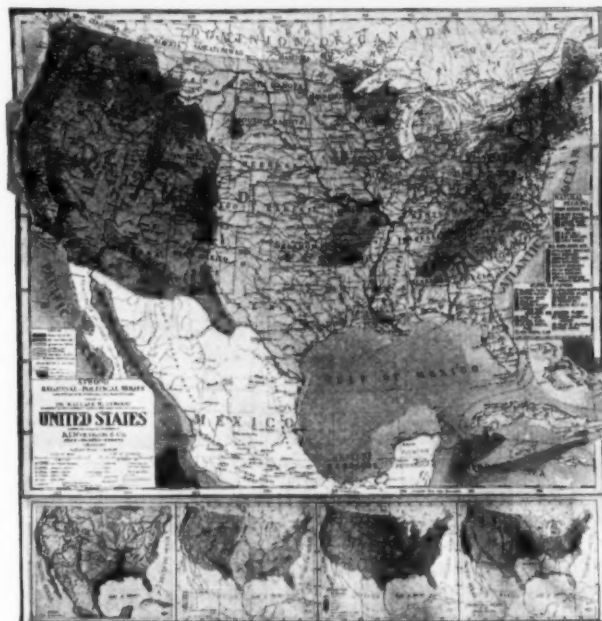
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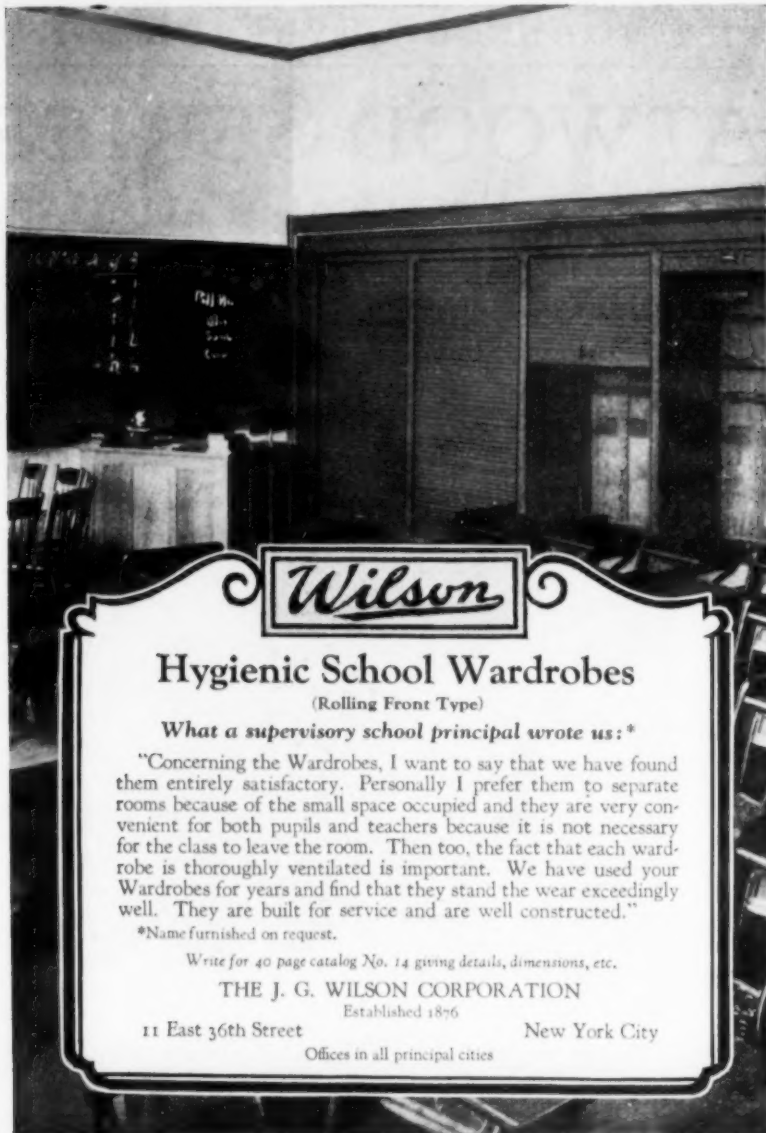
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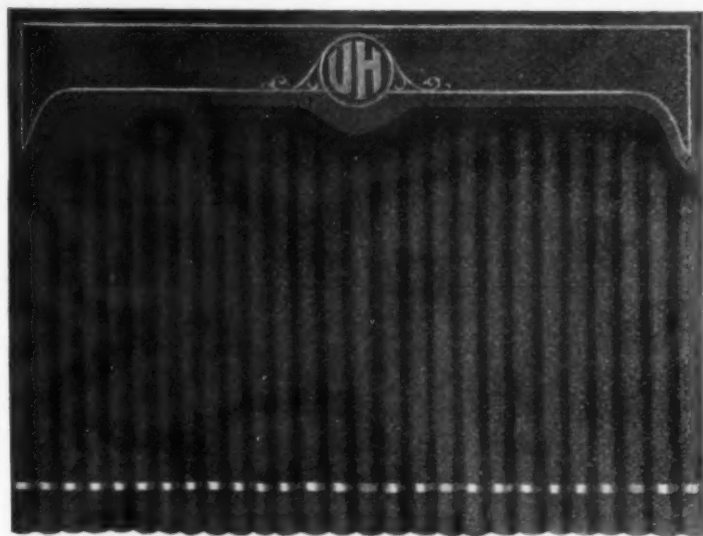
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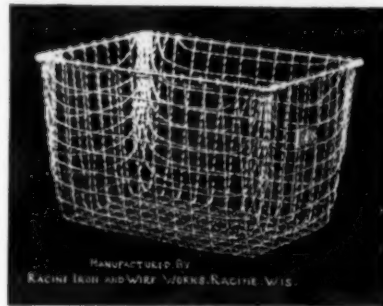
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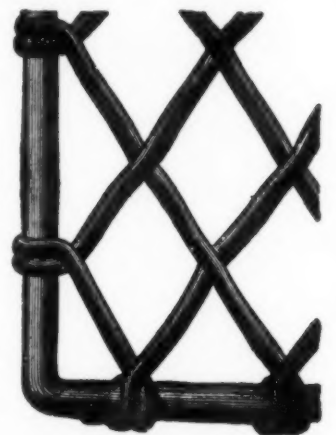
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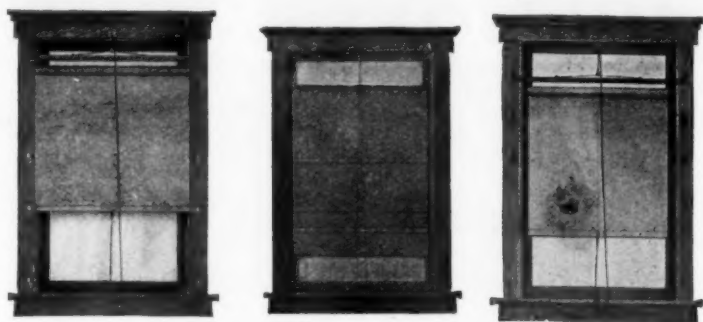


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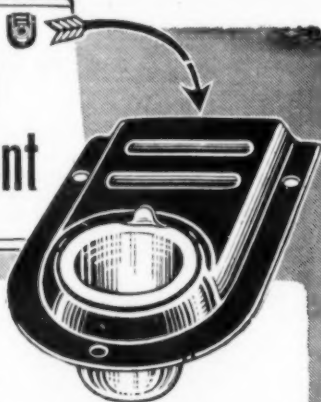
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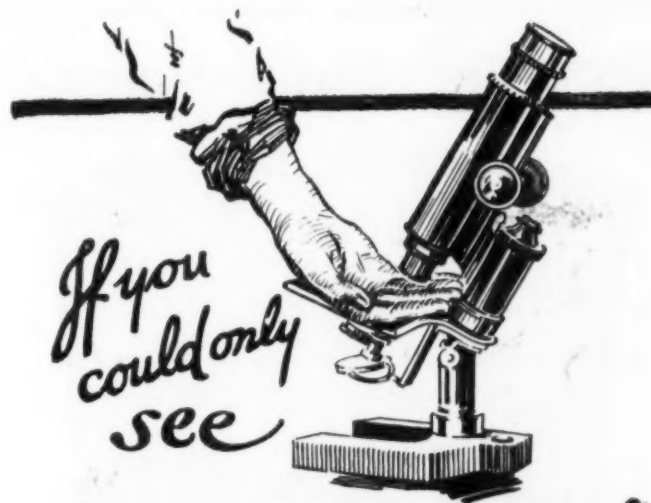
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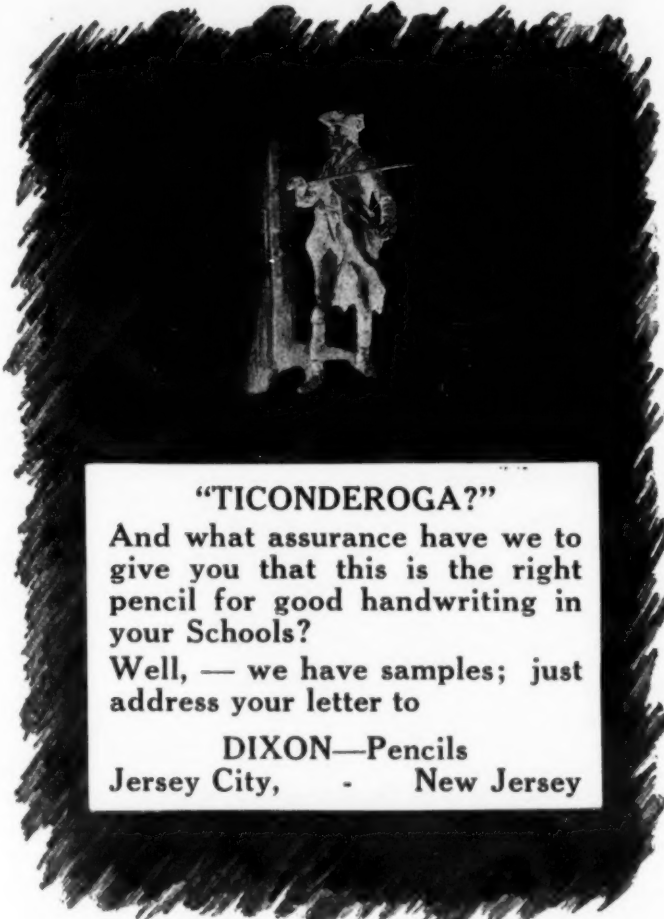
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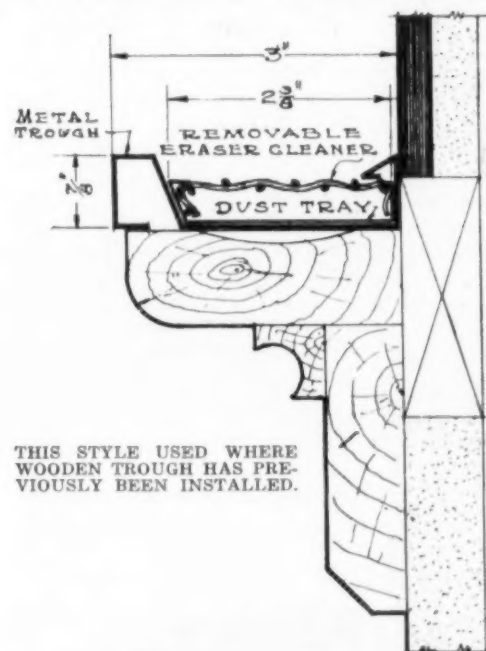
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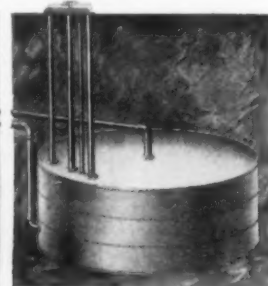
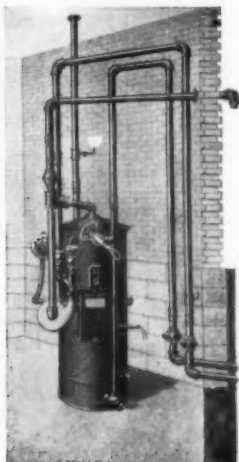
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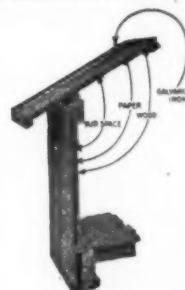
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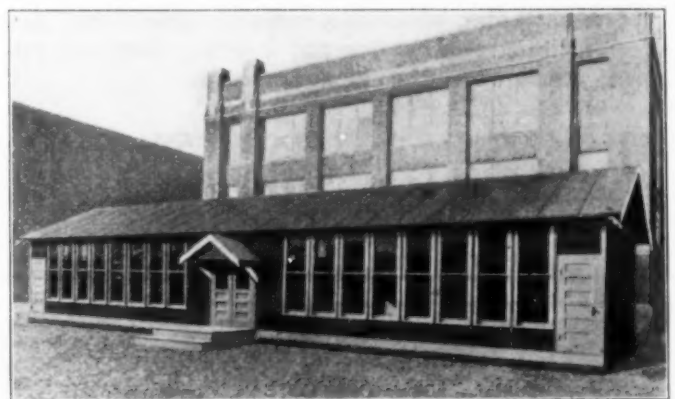
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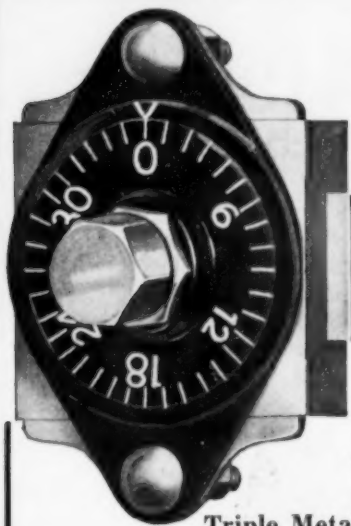
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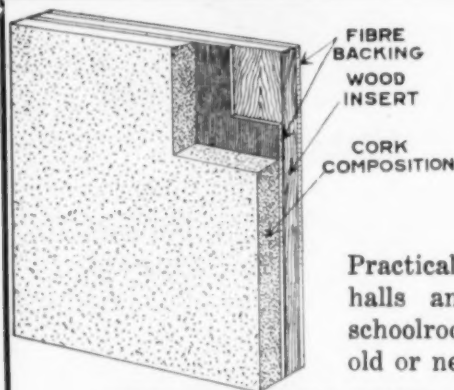
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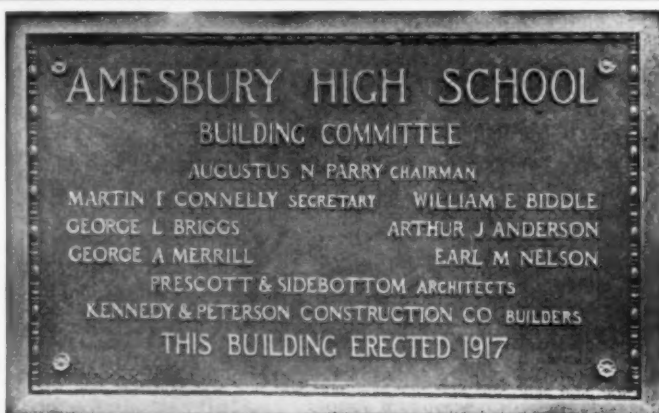
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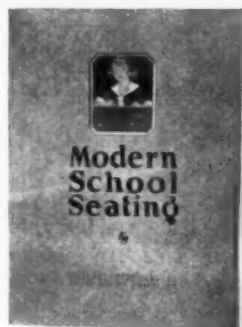
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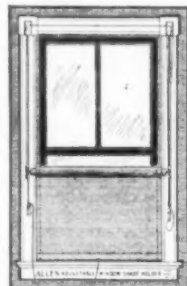
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Gentlemen: I am interested in representing Progressive Teacher the coming season. Send without obligation to me your proposition. If I accept your agency I desire to work the following territory (Name of Summer School or County).

Name.....  
Position.....  
Address.....  
City..... State.....



## THE NATIONAL ASSOCIATION OF TEACHERS' AGENCIES



*The Honor Mark  
of  
Teacher Agencies*

The Membership of the National Association of Teachers' Agencies includes only such Agencies as are of established reputation, and directed by competent Managers, who have the best interests of Education at heart. All members are required to subscribe to the Constitution, Platform and Code of Ethics. Each member is under pledge to do his utmost to promote the interests of his clients, consistent with his primary duty to American Education. Agencies listed below are members of the Association.

NATIONAL ASSOCIATION OF TEACHERS' AGENCIES.



*The Honor Mark  
of  
Teacher Agencies*

## FOR PROFESSIONAL TEACHER PLACEMENT SERVICE

### Albany Teachers' Agency, Inc.

74 Chapel Street, Albany, N. Y. Est. 1885

Provides Schools and Colleges with Competent Teachers.  
Assists Teachers in Securing Positions.

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"Distinguished Personnel Service"

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Seven Offices — Free Registration in ALL.

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Branch Office

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Principals and Superintendents in California must now have Administration Credentials. For details, consult State Board of Education, Sacramento, Calif.

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Boynton's Teachers' Agency of Los Angeles—Est. 1888  
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Efficient, professional, placement service

for  
TEACHERS and SCHOOL OFFICIALS

No advance fee

No charge to school officials

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32 years of successful experience

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Prompt, Efficient and Reliable Service

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ANNA ALLEE, Assistant Manager

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Henry D. Hughes, Manager

Operates in every section of the country  
Publishers of the Brewer National Educational Directory

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Serves all Educational Institutions, Public and Private—  
Elementary, Secondary, Normal Schools and Universities.  
Territory—Westernmost Twelve States, Alaska, the Orient  
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J. M. HAHN and Blanche Tucker, Mgrs.

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Covers Middle Atlantic, South and Middle West

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Outstanding Placement Service

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Earle F. Maloney

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Twenty years experience.

Write for information

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of Boston

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"A small agency can give personal  
attention to individual requirements"

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Some of the very best teachers of the land are  
found in the territory covered by the

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Mentor, Ky.

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Large registration. Prompt service

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22nd Year

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The

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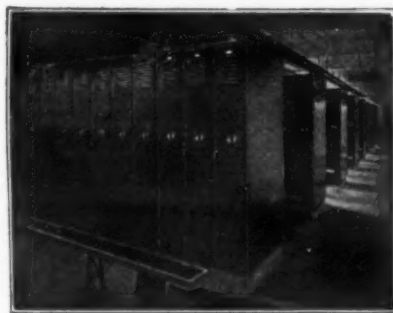
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EDUCATION SERVICE, 1254 Amsterdam Ave., New York; 19 So. La Salle St., Chicago. Operates on a cost basis. It has special facilities for supplying teachers in every department of public school work; also, business managers and purchasing agents, registrars, private secretaries, librarians, cafeteria directors, and trained nurses. Its work includes executive positions—superintendents, principals, and supervisors of all kinds.

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Three Classes of Teachers Who Should Enroll in Our Agency

- 1—Those who desire a better locality.
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**ONE** Method—Full particulars of qualifications  
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WRITE or WIRE needs for teachers. One or two Records of suitable teachers will be sent you by us. No promiscuous application. Acme Teachers' Agency, 702 Henley Bldg., Atlanta, Ga.

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A Distinct Service for Educators Who Appreciate Ethical Standards.

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(A Specialty by a Specialist)

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No charge to employers—No charge to candidates till elected.

Positions waiting—correspondence confidential.

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Receives calls at all seasons for college and normal graduates, specialists, and other teachers in colleges, public and private schools, in all parts of the country. Advises parents about schools.

WARREN NEVIN DRUM, Manager

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OHIO VALLEY TEACHERS' AGENCY

A. J. JOLLY, Mgr.

Mentor, Ky.

412 Sycamore St., Cincinnati, O.

## ALBERT

TEACHERS' AGENCY

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Chicago, Illinois

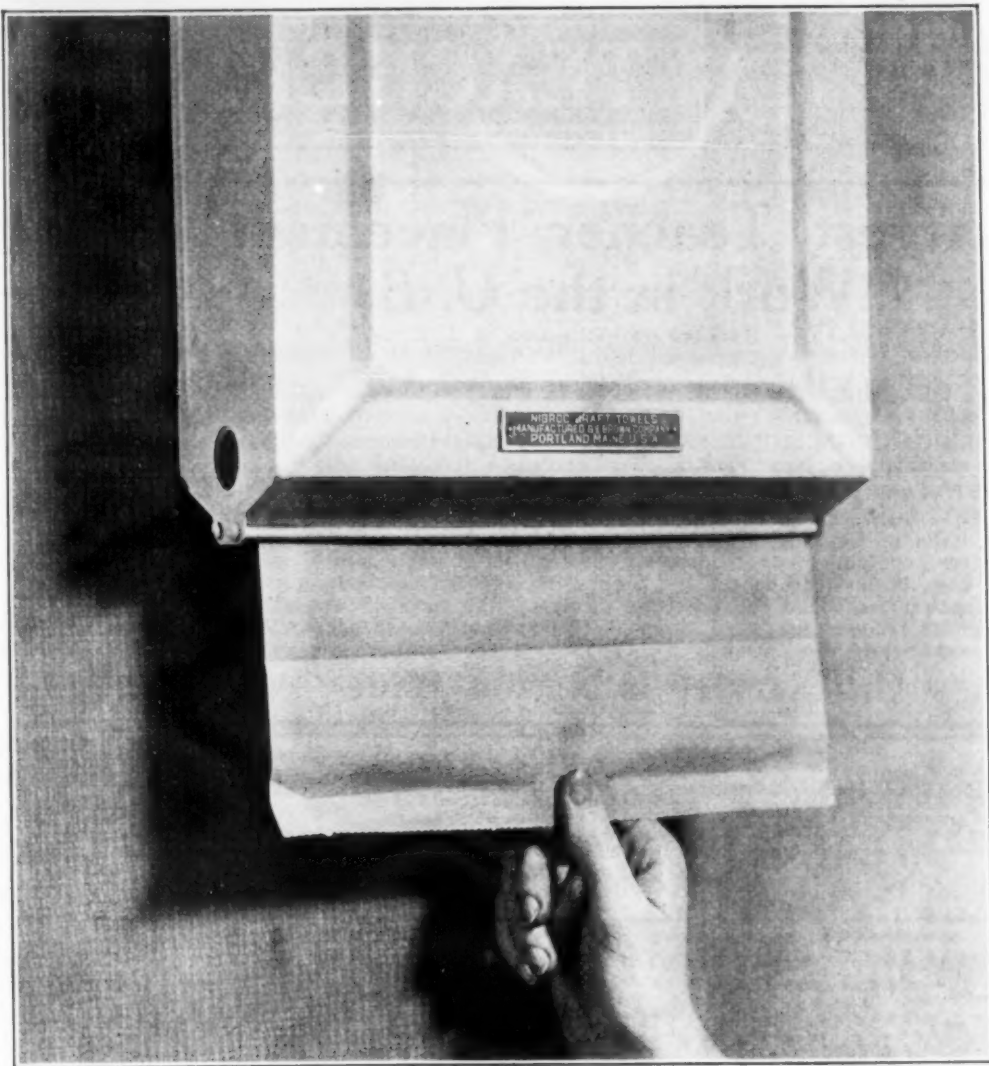
Established 1885—Still under same active management. Best Schools and Colleges permanent clients. Best qualified men and women on our available list. Prompt service. Other Offices—New York, Denver, Spokane.



***THIS** convenient cabinet keeps Nibroc Towels clean and dust-free, and serves them singly.*

*Easy to fill—*

*Merely open front, which is hinged at bottom. Slip the package of 250 towels into place. Draw out wrapper. Lock cabinet. That's all.*



# *Nibroc*—a paper towel that seems made for school children

If the Nibroc Towel were made especially to your order, it could not be better suited to school use.

The Nibroc fibre is highly absorbent—takes up the last drop of moisture. It doesn't lint—doesn't tear easily—doesn't get soggy. You can wipe hands and face vigorously with a Nibroc Towel. It is agreeable to use, and leaves a pleasant feeling that encourages children to be clean.

The Nibroc Towel doesn't roughen the hands.

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You yourself will enjoy using the Nibroc Towel. Let us send you enough samples to make a thorough test in your office or home.

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The manufacturers, Brown Company, Portland, Maine, will be pleased to mail to members of School Boards or of any educational institution a sample pack of Nibroc Towels.

# School Board Journal

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The names given below are those of the leading and most reliable Manufacturers, Publishers and Dealers in the United States. None other can receive a place in this Directory. Everything required in or about a schoolhouse may be secured promptly and at the lowest market price by ordering from these Firms.

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Air Conditioning & Engineering Co.  
Buckeye Blower Company  
Buffalo Forge Company  
Nelson Corporation, The Herman  
Roed Air Filters, Inc.

### AIR FILTERS

Reed Air Filters, Inc.

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### ASH HOISTS

Gillis & Geoghegan

### AUDITORIUM SCENERY

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Arlington Seating Company  
Derby & Company, Inc., P.  
Heywood-Wakefield Co.  
Kundt Company, The Theodor  
Peabody School Furniture Co.  
Progressive Seating Company  
Steel Furniture Company

### BASEMENT SASH, STEEL

Detroit Steel Products Company

### BASEMENT WINDOWS, STEEL

Detroit Steel Products Company

### BENCH LEGS

Angle Steel Stool Company

### BLACKBOARDS—COMPOSITION

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N. Y. Silicate Rock Slate Co.  
Rowles Co., E. W. A.  
Standard Blackboard Company

### BLACKBOARD-SLATE

Natural Slate Blackboard Co.  
Penna. Structural Slate Co.

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Circle A Products Corp.  
Wayne Iron Works

### BOILERS

Kewanee Boiler Company

### BOOK CASES

Libary Bureau

### BOOK COVERS

Holden Patent Book Cover Co.  
Iniquity Publishing Company  
Peckham, Little & Co.  
Walraven Book Cover Co., A. T.

### BOOK PUBLISHERS

American Book Company  
Bruce Publishing Co.  
Heath & Co., D. C.  
Houghton, Mifflin, Co.  
Iniquity Publishing Company  
Ladlow Brothers  
Little, Brown and Company  
Newton & Company  
Pitman & Son, Isaac  
World Book Company

### BRUSHES

Bermes Company, Daniel  
Palmer Company, The  
Robertson Products Co., Theo. B.

### BUILDING MATERIALS

Asbestos Buildings Company  
Detroit Steel Products Company  
Durlon Co., Inc., The  
Indiana Limestone Quarrymen's Assn.  
Milwaukee Corrugating Company  
Structural Slate Company  
Trucon Steel Company

### CAFETERIA EQUIPMENT

Angle Steel Stool Company

### CAFETERIA SEATING

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Pick & Co., Albert  
Sani Products Co., The  
Standard Gas Equipment Corp.  
Van Rance Co., John

### CALCULATING MACHINES

Monroe Calculating Machine Co.

### CHAIRS—FOLDING

Angle Steel Stool Company  
Derby & Company, Inc., P.  
Maple City Stamping Company

### CHARTS

Nystrom & Company, A. J.

### CHEMICALS

Chicago Apparatus Co.

### CLASS BELLS

Federal Electric Company, The

### CLASS RECORD BOOKS

Bradford Printing Company

### CLOCKS—PROGRAM

Hansen Manufacturing Company

### CLOCKS—WALL

International Time Recording Company  
Landis Eng. & Mfg. Co.  
Standard Electric Time Co.

### COOKING APPARATUS

Dougherty & Sons, Inc., W. F.

### CRAYON

American Crayon Co.  
Binney & Smith  
National Crayon Co.  
Peckham, Little & Co.  
Rowles Co., E. W. A.

### CRAYON TROUGHS

Duffield Manufacturing Co.

### DEAFENING GUILTY

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### DESKS

Imperial Desk Company  
Welfare, Inc.

### DISHWASHERS

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### DISINFECTANTS

Bermes Company, Daniel  
Palmer Company, The  
Robertson Products Co., Theo. B.

### DISPLAY CABINETS

Shewana Cabinet Works

### DISPLAY FIXTURES

Multiplex Display Fixture Co.

### DOMESTIC SCIENCE EQUIPMENT

A. B. Stove Company  
Christiansen, C.

### DOORS, STEEL-FIREPROOF

Detroit Steel Products Company

### DRAFTING ROOM FURNITURE

Angle Steel Stool Company  
Christiansen, C.

### DRINKING FOUNTAINS

Clow & Sons, James B.  
Murdoch Mfg. & Supply Co., The  
Nelson Mfg. Company, N. O.  
Puro Sanitary Drink Fountain Co.  
Rundel-Spence Mfg. Company  
Taylor Company, Hasley W.

### ERASERS

Palmer Company, The  
Rowles Co., E. W. A.  
Weber Costello Co.

### ERASER CLEANERS

National Renovating & Supply Co.

### FENCES

American Fence Construction Company  
Anchor Post Iron Works  
Cyclone Fence Co.  
Page Fence & Wire Prod. Assn.  
Stewart Iron Works Company, The  
Wayne Iron Works

### FILING CABINETS

Library Bureau

### FIRE ALARMS

Federal Electric Company, The

### FIRE ESCAPES

Low Company, The  
Potter Manufacturing Corp.  
Standard Conveyor Company

### FIRE EXIT LATCHES

Sargent & Company  
Steffens-Amberg Company  
Vonnegut Hardware Co.

### FIRE PROOF DOORS

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Detroit Steel Products Co.

### FIREPROOFING MATERIALS

Asbestos Buildings Company  
Milwaukee Corrugating Company

### FLAGS

Annin & Co.  
Detra & Co., Inc., John C.

### FLAG POLES

Nelson Mfg. Co., N. O.

### FLOOR COVERING

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Heywood-Wakefield Co.  
Marbleloid Company  
Rubberstone Corporation

### FLOORING

Oak Flooring Bureau

### FLOORING—COMPOSITION

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Duraflex Company, The  
Maple Flooring Mfrs. Assn.  
Marbleloid Company  
Rubberstone Corporation

### FLOOR TILE

Norton Company  
Rubberstone Corporation

### FLUSH VALVES

Clow & Sons, James B.  
Haas Company, Philip  
Hoffmann & Billings Mfg. Co.  
Nelson Mfg. Company, N. O.  
Rundel-Spence Mfg. Company  
Speakman Co.  
Vonnegut Hardware Co., Joseph A.

### FOLDING PARTITIONS

Wilson Corp., Jas. G.

### FURNACES

MaGill Fdry. & Furn. Wks., P. H.

### FURNITURE

American Seating Co.  
Angle Steel Stool Company  
Arlington Seating Company  
Columbia School Supply Company  
Derby & Company, Inc., P.  
Detroit School Equipment Co.  
Economy Drawing Table & Mfg. Co.  
Heywood-Wakefield Co.  
Gunn Furniture Company  
Imperial Desk Company  
Inner Braced Sales Company  
Kundt Company, The Theodor  
Library Bureau  
Maple City Stamping Company  
National School Equipment Company  
Peabody School Furniture Co.  
Progressive Seating Company  
Readboro Chair Company  
Rowles Co., E. W. A.  
Steel Furniture Company  
Standard School Equipment Co.  
Union School Furnishing Company  
Welfare, Inc.  
Wiese Laboratory Furniture Co.

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Matthews Gas Machine Co.

### GAS STOVES

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### GLASS

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Pittsburgh Plate Glass Co.

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Rand, McNally & Company

### GLUE

Higgins & Company, Charles M.

### GRANDSTANDS

Anchor Post Iron Works

### GYMNASIUM APPARATUS

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Medart Mfg. Co., Fred  
Narragansett Machine Company

### GYMNASIUM BASKETS

Racine Iron & Wire Works

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Bayley Mfg. Company  
Buckeye Blower Co.  
Buffalo Forge Company  
Clow & Sons, James B. ("Gastem")  
Dunham Company, C. A.  
Healy-Ruff Company  
MaGill Fdry. & Furn. Wks., P. H.  
Nelson Corp., The Herman  
Nesbitt, Inc., John J.  
Peerless Unit Vent. Co., Inc.  
Webster & Co., Warren

### HYDRANTS

Murdock Mfg. & Supply Co., The

### INK

Commercial Paste Company  
Higgins & Company, Charles M.  
Rowles Co., E. W. A.

### INK WELLS

Jacobus Pneumatic Inkwell Co.  
Squires Inkwell Company  
U. S. Inkwell Company

### JANITORS' SUPPLIES

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Dougherty & Sons, Inc., W. F.  
National Renovating & Supply Co.  
Palmer Company, The  
Pick & Co., Albert  
Robertson Products Co., Theo. B.  
Van Rance Co., John

### LABORATORY FURNITURE

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Kewanee Mfg. Company  
Peterson & Co., Leonard  
Sheldon & Company, E. H.  
Wiese Laboratory Furniture Co.

### LABORATORY SUPPLIES

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### LANTERN SLIDES

Christiansen, C.

### LATHES

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### LIBRARY FURNITURE

Library Bureau

### LIBRARY FIXTURES

Federal Electric Company, The

### LIGHTING EQUIPMENT

Federal Electric Company, The  
Guth Company, Edwin F.  
Hollonhans Glass Company  
Freeport Gas Machine Company  
Gillis & Geoghegan, The  
Globe Ventilator Company  
Greenfield Tap & Die Corp.  
Greer Publishing Company  
Huntington Laboratories, Inc.

### LINOLEUMS

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### LIQUID FLOOR HARDENER

Greenfield Tap & Die Corp.

### LIQUID SOAP

Huntington Laboratories, Inc.

### LOCKERS

Robertson Products Co., Theo. B.

### LOCKERS

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Durand Steel Locker Co.  
Federal Steel Fixture Co.  
Lyon Metallic Mfg. Co.  
Medart Mfg. Co., Fred  
Narragansett Machine Company  
Locke-Keyless

### LOCKE-KEYLESS

Miller Keyless Lock Co., J. B.  
Triple Metals Corporation

### MAPS

Nystrom & Company, A. J.  
Rand, McNally & Company

### MEMORIAL TABLETS

Russell & Sons Co., Albert

### METAL LATH

Milwaukee Corrugating Company

### METAL CHALK RAILS

Milwaukee Corrugating Company

### MICROSCOPES

Spencer Lens Company

### MOTION PICTURE MACHINES

DeVry Corporation, The

### PAINTS

Hockaday Company, The  
Pittsburgh Plate Glass Co.  
Tropical Paint & Oil Co., The  
Wadsworth, Howland & Co., Inc.

### PAINT SPRAYING EQUIPMENT

DeVilbiss Mfg. Co., The

### PANIC EXIT DEVICES

Steffens-Amberg Company

### PASTE

Commercial Paste Company

### PENCILS

Dixon Crucible Co., Joseph

### PIANOS

Acclaim Company, The

### PLAYGROUND APPARATUS

Chicago Gymnasium Equipment Co.  
Hill-Standard Company  
Medart Mfg. Co., Fred  
Narragansett Machine Company  
Zieg Mfg. Company, The F. B.

### PLUMBING FIXTURES

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Brunswick-Balke-Collender Co.  
Clow & Sons, James B.  
Copper & Brass Research Assn.  
Durlon Co., Inc., The  
Haas Company, Philip  
Hoffmann & Billings Mfg. Co.  
Nelson Mfg. Company, N. O.  
Rundel-Spence Mfg. Company  
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American Portable House Company

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### RADIATOR HANGERS

Healy-Ruff Company

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Wilson Corp., Jas. G.

### SAFETY STAIR TREADS

American Abrasive Metals Company

### SASH OPERATING DEVICES, STEEL

Detroit Steel Products Company

### SASH, STEEL

Detroit Steel Products Company

### SASH, VENTILATING

Detroit Steel Products Company

### SCENERY

Twinn City Scenic Co.

### SCIENTIFIC APPARATUS

Chicago Apparatus Co.

### SCRUBBING EQUIPMENT

Rowles Company, E. W. A.

### SHOWER

Clow & Sons, James B.  
Hoffmann & Billings Mfg. Co.  
Speakman Co.

### SIGNAL SYSTEMS

Hansen Manufacturing Company  
Holzer-Cabot Electric Co.

### SIRENS

Federal Electric Company, The

### SPRAY-PAINTING EQUIPMENT

DeVilbiss Mfg. Co., The

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Milwaukee Corrugating Company

### STEEL JOISTS

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### STEEL SASHES

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### STEEL STORAGE CABINETS

Durabilt Steel Locker Co.  
Medart Mfg. Co., Fred

### STEEL WINDOWS

Detroit Steel Products Company

### STENCIL DUPLICATOR

Reese Company, The

### STOOLS, STEEL

Angle Steel Stool Company

### SWEEPING COMPOUNDS

Robertson Products Co., Theo. B.

### TABLES

Gunn Furniture Company  
Dunham Company, C. A.  
Library Bureau  
Mutschler Brothers Company  
Rinehimer Bros. Mfg. Co.

### TABLETS

Blair Company, J. C.

### TALKING MACHINES

Victor Talking Machine Co.

### TEACHER AGENCIES

National Association of Teacher Agencies  
Teacher Agencies Directory

### TELEPHONE SYSTEMS

Federal Electric Co., The  
Federal Tel. & Tel. Co.  
Holzer-Cabot Electric Co.

### TEMPERATURE REGULATION

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Johnson Service Company  
National Regulator Company

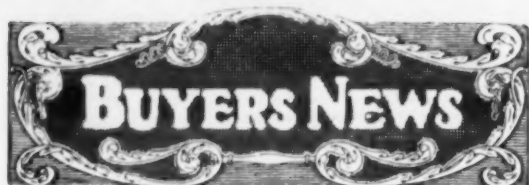
### THERMOMETERS

Wildner-Pike Thermometer Co.

### TOILET PAPER AND FIXTURES

A. P. W. Paper Company  
Bermes Company, Daniel  
Palmer Company, The  
Robertson Products Co.,





### NEW TRADE PRODUCTS

**Handy Pocket Microscope.** The Bausch & Lomb Co., of Rochester, N. Y., has recently issued a small pocket microscope for school or home study of the sciences. The pocket microscope has been produced for a variety of uses and is suited for use in botany, mineralogy, nature study and similar subjects. The microscope is sturdy and compact, light in weight, and may be easily and quickly adjusted for use. It is adapted to the use of scientist and student alike and offers special features for home use.

**A Ventilating Shade.** The Athey Company, of Chicago, Ill., in the manufacture of the Athey Perennial shade, has not only perfected a shade of the highest efficiency, but it has also solved the problem of ventilation without the use of expensive awnings or wood-slat blinds.

The Athey Perennial window shade is made of the highest grade coutille cloth herringbone weave. It is a non-conductor of heat and cold when the shade is lowered, as the character of the material stops heat or cold generated by the glass surface. For free ventilation at times when there is no sun, the shade may be raised from the bottom or lowered from the top, and the window opened in the usual way.

The Athey Company also manufactures disappearing partitions, skylight shades and cloth-lined metal weatherstrips. Information concerning any of the Athey products may be obtained by writing the firm at 6035 West 65th St., Chicago, Ill.

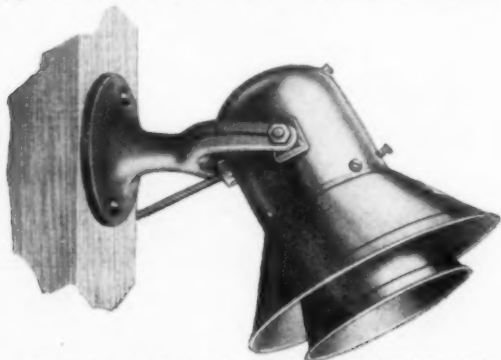
### TRADE PUBLICATIONS

**Issues Revised Price Lists.** The Bausch & Lomb Co., of Rochester, N. Y., has issued a revised price list of microscopes, microtomes and accessories for educational institutions. Special attention is directed to the pages describing research microscopes, apochromatic objectives, blood counting apparatus, and microtomes. The firm extends the discount privilege to institutions making purchases in large quantities.

**Paradise Playgrounds.** The F. B. Zieg Mfg. Company of Fredericktown, Ohio, has just issued a very interesting catalog entitled "Paradise Playgrounds." This catalog describes and illustrates playground equipment suitable for school playgrounds and gymnasiums, including junior and senior swings, traveling rings, teeter boards and ladders, ocean waves, portable slides, merry-go-rounds, horizontal ladders, jumping and vaulting standards, gymnasium combinations—consisting of horizontal bar, climbing poles, flexible ladder, incline sliding poles, flying rings and trapeze. All equipment is rigidly tested and inspected, and maximum strength, safety and durability are assured wherever Paradise Equipment is installed. Improved hangers and hold-tite fittings for the equipment are also described.

The F. B. Zieg Mfg. Company also issues several interesting circulars and a complete little booklet on "How to Plan Paradise Playgrounds," which is a treatise on how to make "that vacant lot a pleasure plot," explains how to plan space to fit equipment, how to plan equipment to fit space, and how to select equipment and the necessary accessories. Copies of the above will be sent to school authorities on request.

**The Siren as a School Signal.** The bell, the whistle, the buzzer are types of warning signals which are frequently found to be ineffective in this age of noise and hustle. For fire alarm and industrial signaling the distinctive tone and the continuous volume of the siren have made this type of signal practically indispensable. Whether



A TYPICAL FEDERAL SIREN FOR SCHOOL USE.

it be pitched to a weird, penetrating screech or a deep guttural roar, the siren commands instant attention above any ordinary combination of local noises and distractions.

School authorities have been slow to recognize the value of the siren for school signaling and have been conservative in discontinuing the use of the older types of devices. Of recent years, however, they have adapted the siren for new buildings and for replacements in old school-houses, particularly for corridor and playground use. Manufacturers of sirens have contributed considerably to this change by offering types of sirens which afford a rather pleasing musical note, without any loss of the distinctiveness of the siren. They have overcome the natural prejudice against the unearthly screech of the fire types as well as the rasping grunt of the automobile or street signal type of apparatus. The new models of school sirens are weather and boy proof, and have the merit of long life and dependable service.

In this connection, the Federal Electric Company of 8700 South State Street, Chicago, Illinois, has issued a very complete little booklet of interest to school authorities. It describes and illustrates the various types of Federal sirens and their use in the school system and includes complete specifications and installation details. Prices are also given.

**Oak Floors for Schools.** The Oak Flooring Bureau, of Chicago, has issued a useful circular on the use of oak flooring in schools, illustrating by actual pictures the permanence, cleanliness, economy and beauty of oak in classrooms, study halls, art rooms, sewing rooms, manual training shops, libraries, science amphitheaters, etc.

The Oak Flooring Bureau points out that "thousands of restless, tramping feet file daily in and out of schoolrooms, and scamper up and down the corridors of our modern school buildings. The wear and tear on the floor is continuous and extreme. The strain on growing muscles is extreme, too, and must be minimized. No flooring material meets the need as does oak flooring. It is Nature's own product, healthful under foot, shock-resisting, not cold, clammy, or artificially rigid; yet it is a permanent floor, enduring heaviest wear, and always beautiful."

Architects and school authorities who desire assistance in solving school flooring problems may receive specifications.

**Issues New General Catalog.** Albert Pick & Co., Chicago, has just issued its general catalog of equipment, furnishings, and general household supplies for use in schools and institutions. The catalog is a rather formidable book of 308 pages, and is marked Catalog E-27, Year 1925.

The catalog is strictly a reference book for the use of institutional heads and purchasing agents, and has been worked out along lines which will make the selection of goods simple and rapid. Each article is illustrated and accurately described, and prices are appended in plain figures. In the case of rugs, linoleum, uniforms, blankets, and chinaware, and articles in which color is an essential feature to be considered in making a choice, large colored illustrations are provided so that the purchaser may know accurately what he is planning to buy.

The catalog calls attention to the fact that the merchandise included in the "Pix" line is all made expressly for public service, where it will be subjected to heavy wear and where durable quality is absolutely essential.

Copies of the catalog will be sent to any school authority on request.

—At Covington, Ky., it was learned by accident that a little girl had played truant for six months without being discovered. Then somebody also remembered that the school board employed a truant officer. Perhaps he, too, played hooky. This would suggest a first truant officer to find the second.

—A college professor recently made the statement that "The American people spend eight cents each for professors' salaries annually, while they spend three dollars for ice cream and nine dollars for perfumery and cosmetics." Thereupon the Frankfort, Ind., News-Crescent remarked: "These figures do not mean anything and the statement is misleading. The college professor is made the butt of a good many jokes; perhaps more than he deserves. Most college professors are capable and sensible men. Occasionally one starts out to startle the world and he generally does, for he makes a monkey of himself."

—Here's a new one! The mayor of Chelsea, Mass., got sore at the local school board and called it the "millionaires' club." And now the mayor is not certain whether that phrase is a slam or a compliment.

## AFTER THE MEETING



### Good Scribes, Both

A professor at one of our higher institutions of learning recently held a written examination. Among the papers handed in, was one so badly written that he decided not to waste his time trying to decipher it.

He wrote on the margin, "I can't grade this paper. The writing is illegible," and gave it back to the student.

A few minutes later, the student came up to the instructor's desk, with the paper in his hand.

"Will you tell me what this is that you've written on the margin, professor," he said, "I can't make it out."

The professor looked. Then he cleared his throat. "Ah—er—I wanted to go over that paper with you personally," he said.

### NEW INFORMATION FROM TEST PAPERS

The Nile is used to navigate the land. Vesuvius made an eruption and buried Pompey.

Peter Stuyvesant ruled the colony with a wooden leg and an iron hand.

Idiotic words (idiomatic) should be used. Use idiots to avoid slang.

I am sure parents are pleased with the way their children are constructed in this school.

Plutarch's Lies.

I guess I will study a little this summer to keep from being ideal.

Titus carried off the arch which was called the Arch of Titus, and also the golden candlestick.

Columbus started from Spain in America, sailed across the Mississippi Ocean, and landed in Memphis, Tennessee.

Julius Caesar died on the 15th day of March, the day on which the Ides of March assemble.

So when the people gathered around Caesar, at the signal of the Ides drew their daggers and slew him.

Grammar teaches us to speak erect.

So that I will be deficient to become a good stenographer.

In that country there were birds by the name of Bagpipes.

### A Muddled Oaf

Professor (concluding difficult explanation)—Is that cigarette smoke I see back there, Brown?

Student—No, sir. It must be just the fog I'm in, sir.—Boston Transcript.

### Absence of Stomach Ache

An English schoolboy rendered "Pax in bello," "Freedom from indigestion."—Boston Transcript.

### Both Muddled

The absent-minded professor, who had been attending a lecture all the evening, returned home late and rather fuddled.

On entering his bedroom, he thought he heard someone move under the bed.

"Who's under there?" he called.

"No one," replied the burglar.

"Funny!" said the professor. "I could have sworn I heard someone there."

### Correct

Teacher—Why isn't distance on the ocean measured by the mile?

Johnny—Because it's knot.—Boston Transcript.

### One on Dad

Teacher: "What is the most important part of a penknife?"

Tommy: "I dunno."

Teacher: "What part does your father use most?"

Tommy: "The corkscrew!"

### Same Everywhere

Professor: "Name some production of which the supply exceeds the demand."

Pupil: "Trouble."

### Meet This New One

Schoolboy (inquiring at a book store)—"Have you 'Lamb's Tales'?"

New Clerk—"This is a book store, not a meat market."

—"For more than ten years we have built no schools. At our high school pupils are sitting in each other's laps for lack of room," says a Danville, Va., newspaper. Now the parents are beginning to sit up and take notice and will vote aye on the \$350,000 bond election.

# MEDART

## Locker, Playground & Gymnasium Equipment



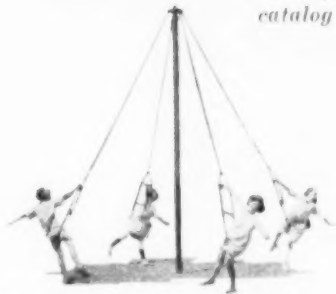
*Medart Steel Lockers are generally recognized as the ultimate in refinement and durability. For complete description of all types, write for 40-page catalog A-2.*

*... even unto the second generation*

Such is the durability of Medart School Equipment that you will find it giving service to the children of the children who first used it many years ago.

Could you ask for more of a steel locker, of gymnasium equipment or playground apparatus than that it should continue to give service through at least two generations of the strenuous punishment that normal, healthy youngsters can mete out?

It is a wise purchase that provides for the next generation. Careful buyers always specify Medart Equipment.



*Medart Playground Equipment meets all requirements for safety, durability and attractiveness to the child. Fully illustrated and described in catalog M-5.*

### Fred Medart Manufacturing Co.

Potomac and DeKalb Sts.  
New York

Chicago

St. Louis, Mo.  
San Francisco



*Medart Gymnasium Equipment is found in the finest outfitted gymnasiums in the country. Write for catalog L-6 which contains a description of the most modern equipment made.*



*The Medart Steel Lockers installed in Soldan High School, St. Louis, Mo., 17 years ago, are today giving excellent daily service.*

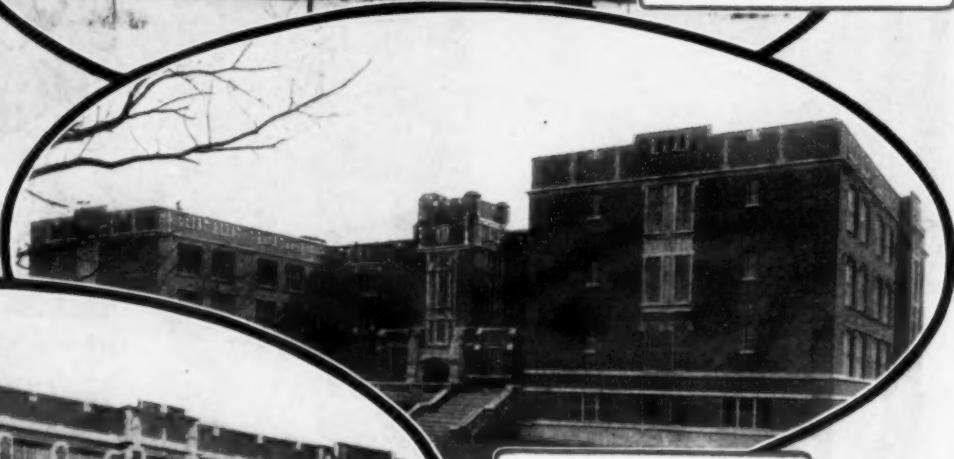


# Pittsburgh Proof Products

Glass  
Paint-Varnish  
Brushes



*Nathan Hale School  
Toledo, Ohio*



*McKinley School  
Toledo, Ohio*

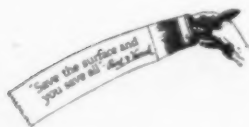


*Whittier School  
Toledo, Ohio*



The Velumina Color Book Deluxe sent you free. This book contains fifty-four samples of Velumina colors. Sixteen regular tints, twenty intermixed shades, and eighteen examples of Filigreed Finishes.

Send for this book—a most valuable color guide. Write Department "Z" today.



VARNISH for schools—think of what it endures! Thousands of scuffling, hurrying feet—thousands of mischievous hands. It gets ten thousand times the wear you give the varnish in your home. If it's going to endure, it must be extra good varnish!

## PITCAIRN Aged Varnishes

are preferred in hundreds of the most modern schools of the country, where quick shabbiness would be the fate of a brittle resinous varnish. None but such a fine gum varnish as Pitcairn can endure the school test!

None but such a well aged

varnish as Pitcairn can hold its "depth" and richness of appearance!

Whatever you need—Glass, Paint, Varnish, Brushes—the Pittsburgh Plate Glass Company has a product that exactly fills your requirements. Sold by quality dealers; used by exacting painters.

# PITTSBURGH PLATE GLASS CO.

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# *The Floor Preferred for Schools and Colleges*

Moulding's

# **T-M-B** **FLOORING**

*"the floor that keeps its promise"*

**Y**OU make no mistake selecting Moulding's T-M-B Flooring. It has stood the test of time and use. It has demonstrated its permanency and its special fitness for schools and colleges by years of strenuous service in class rooms and corridors in educational institutions throughout the United States. Repeat orders for additional installations in many of these buildings is the proof of its known quality.

**SAFE AND QUIET**—Its smooth, rubberlike surface is *never* slippery. It is always quiet under the constant tread of thousands of feet.

**HEALTHFUL**—Its hygienic and absolutely seamless surface affords no refuge for germs or vermin.

**ECONOMICAL**—Installation cost is low; that of maintenance nil. Occasional waxing gives it the polish of newness.

**COMFORTABLE**—Its resilient quality assures easy walking; comfort for every step.

**PERMANENT**—Made of imperishable materials Moulding's T-M-B Flooring never rots, dries out, or deteriorates; never shrinks, expands, or comes loose. When damaged it is never necessary to patch or tear up the floor. Repairs are always invisibly made by merely adding new T-M-B material to the affected part.

*Before you decide get full information about  
Moulding's T-M-B Flooring*

A few of the many T-M-B installations in schools and colleges throughout the United States:

Altoona Junior High School, Altoona, Pa.  
Arthur H. Howard Junior High School, Wilmette, Ill.  
Bloomington Grade Schools (six), Bloomington, Ill.  
Community High School, Heyworth, Ill.  
Clifton Park School, Baltimore, Md.  
Crane Technical High School, Chicago, Ill.  
DuBois School, Springfield, Ill.  
Empire Township High School, LeRoy, Ill.  
Freeport School, Freeport, Pa.  
Goliad School, Galveston, Texas.  
Jackson Place School, Baltimore, Md.  
Islip High School, Islip, L. I.  
Keene Normal School, Keene, N. H.  
Leechburg High School, Leechburg, Pa.  
Little Rock Schools, Little Rock, Ark.  
Hawthorne Schools, Elmhurst, Ill.  
Lincolnwood School, Evanston, Ill.  
Medina High School, Medina, N. Y.  
Middleton Schools, Middleton, O.  
New Trier High School, Winnetka, Ill.  
Oakwood Village School, Dayton, O.  
Oil City Junior High School, Oil City, Pa.  
Potter Fresh Air School, Indianapolis, Ind.  
School No. 69, Baltimore, Md.  
Tonawanda Schools, Tonawanda, N. Y.  
Lynn Junior High School, Lynn, Mass.  
McKinley School, Racine, Wisconsin.  
Tucker School, Milton, Mass.  
U. S. Naval Academy, Annapolis, Md.  
Tilden High School, Chicago, Ill.  
Williamsville High School, Williamsville, N. Y.  
University of Cincinnati, Cincinnati, Ohio.  
St. Hedwig's Industrial School, Niles, Illinois.  
Thos. F. Bayard School, Wilmington, Del.  
Colorado State Teachers' College, Greeley, Colorado.  
Rutger's College, New Brunswick, N. J.  
High School, Oswego, N. Y.  
New School, Colgate, Md.  
Mason School, Chicago, Ill.

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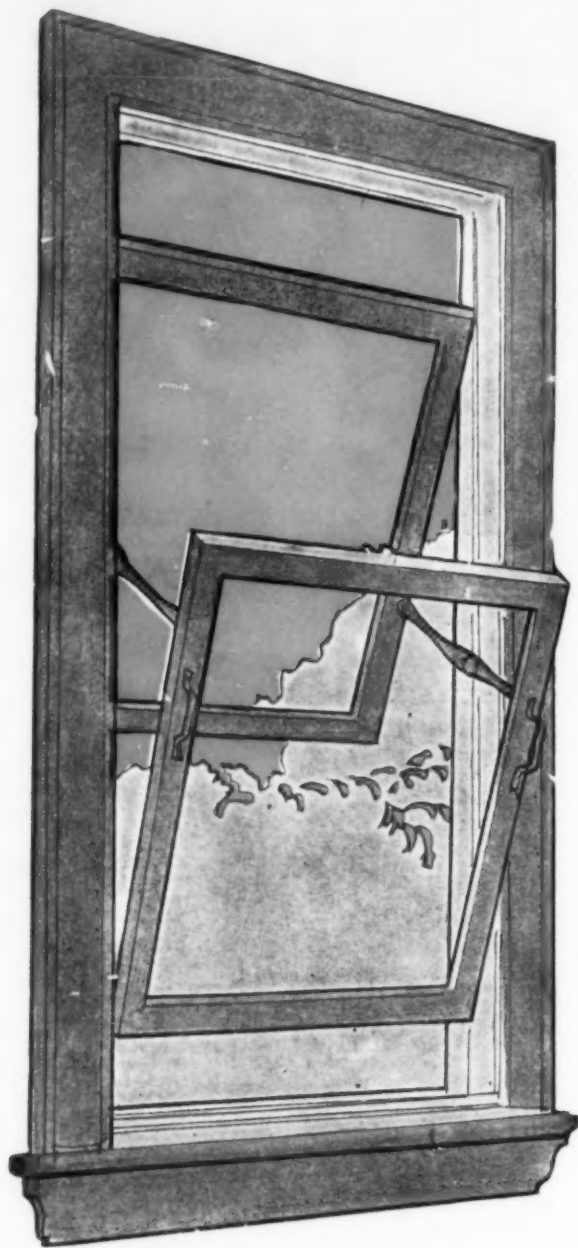
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*Over 60 years of responsibility and financial stability*

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## OPEN WINDOWS AT SCHOOL AID PUPILS' HEALTH

Children Would Be Benefited by Better Air Says State Director.

—NEW YORK EVENING WORLD.

Dr. William A. Howe, State Medical Inspector, in making his much discussed report, states that "children in open air classes suffer less from colds and other illnesses than do pupils in closed rooms and are more regular in their attendance."

The fact that Dr. Howe stresses is not a new discovery, as thousands of pupils are being benefited by the wisdom of architects and school boards in their choice of AUSTRAL WINDOWS.

Open the AUSTRAL WINDOW\* and you let in fresh air *Without Draft.*

\* AUSTRAL WINDOWS mean  
*Ventilation Without Draft.*

*International Casement Company, Jamestown, N. Y., manufacture the AUSTRAL WINDOWS in solid steel.*

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PARK AVE AUSTRAL WINDOW CO. NEW YORK  
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